Top: The Chi Omega Fountain is on KU’s Lawrence campus. Above: The Center for Remote Sensing of Ice Sheets develops new technologies and computer models to measure and predict the response of sea level change to the mass balance of ice sheets in Greenland and Antarctica.
Contents and Administration

Tables of Contents

A complete Table of Contents appears at the beginning of each chapter of this catalog. The page numbers in the following table are those of each chapter’s Table of Contents.

General Information ................................................................. 9
Graduate Studies ................................................................. 35
School of Allied Health ......................................................... 41
School of Architecture, Design and Planning ......................... 59
School of Business ............................................................. 71
School of Education .............................................................. 87
School of Engineering ......................................................... 121
School of Journalism and Mass Communications .................. 149
College of Liberal Arts and Sciences ....................................... 153
School of the Arts .............................................................. 269
School of Medicine ............................................................. 279
School of Music ................................................................. 297
School of Nursing ............................................................... 315
School of Pharmacy ............................................................ 325
School of Social Welfare ....................................................... 357
Index ...................................................................................... 347
Campus Maps ....................................................................... 357

Graduate Studies

Administration
Sara Thomas Rosen, Associate Vice Provost and Dean of Graduate Studies
   Office of the Vice Provost for Research and Graduate Studies
   Strong Hall, 1450 Jayhawk Blvd., Room 213
   Lawrence, KS 66045-7518
   graduate@ku.edu, www.ku.edu/graduates, (785) 864-8040

Allen Rawitch, Vice Chancellor for Academic Affairs and Dean of Graduate Studies, Medical Center
   KU Medical Center, 5015 Wescoe Pavilion, Mail Stop 1040
   3901 Rainbow Blvd., Kansas City, KS 66160
   www2.kumc.edu/an/gradstudies, (913) 588-1258

Schools with Graduate Degree Programs

Allied Health. Karen L. Miller, Dean
Architecture, Design and Planning. John C. Gaunt, Dean
Business. William Fuerst, Dean
Education. Rick Ginsberg, Dean
Engineering. Stuart Bell, Dean
Journalism and Mass Communications. Ann M. Brill, Dean
Liberal Arts and Sciences. Gregory B. Simpson, Interim Dean
   School of the Arts. Elizabeth Kowalchuk, Associate Dean
Medicine. Barbara Atkinson, Executive Dean
Music. Alicia C. Clair, Interim Dean
Nursing. Karen L. Miller, Dean
Pharmacy. Kenneth L. Audus, Dean
Social Welfare. Mary Ellen Kondrat, Dean

The Kansas Board of Regents

Jarold Boettcher, Beloit
Jill Docking, Wichita
Christine Downey-Schmidt, Inman
Richard Hedges, Fort Scott
Dan Lykins, Topeka
Janie Perkins, Garden City
Donna L. Shank, Liberal
Garry Sherrer, Overland Park
William Thornton, Atchison
Reginald Robinson, President and CEO
   1000 Southwest Jackson St., Suite 520, Topeka, KS 66612-1368
   www.kansasregents.org, (785) 296-3421, fax: (785) 296-0983

The University of Kansas

Administration
Bernadette Gray-Little, Chancellor
Danny Anderson, Interim Provost and Executive Vice Chancellor, Vice Provost for Academic Affairs, Lawrence
Barbara Atkinson, Executive Vice Chancellor, Medical Center
Lynn Bretz, Director of University Communications, Lawrence
Robert M. Clark, Vice Chancellor and Dean, Edwards Campus
Warren Corman, University Architect and Special Assistant to the Chancellor
Shelley Gebar, Chief of Staff, Medical Center
Diane Hoos Goddard, Vice Provost for Administration and Finance, Lawrence
Theresa K. Gordzica, Chief Business and Financial Planning Officer, Lawrence
Donald C. Holland Jr., University Director of Internal Audit
Mary Lee Hummert, Vice Provost for Faculty Development, Lawrence
Karen Miller, Senior Vice Chancellor for Academic and Student Affairs, Medical Center
Lew Perkins, Director of Athletics
Edward Phillips, Vice Chancellor for Administration, Medical Center
James Pottorff Jr., University General Counsel
Marlesa A. Roney, Vice Provost for Student Success, Lawrence
Donald W. Steeples, Senior Vice Provost for Scholarly Support, Lawrence
Denise Stephens, Vice Provost for Information Services and Chief Information Officer, Lawrence
Deborah J. Teeter, University Director of Institutional Research and Planning
Paul Terranova, Vice Chancellor for Research and President, Research Institute, Medical Center
Steven Warren, Vice Provost for Research and Graduate Studies and President and Chief Operating Officer, KU Center for Research, Lawrence

Front cover (clockwise from top): Dyche Hall, on KU’s Lawrence campus, is listed on the National Register of Historic Places. Library collections at KU contain more than 4.3 million volumes. Spencer Museum of Art offers a collection of nearly 36,000 artworks and artifacts in all media. Albert Romikes (right), assistant professor of mechanical engineering, explains images on a parallel processing computer. Pharmaceutical chemistry graduate students conduct research in the Multidisciplinary Research Building on west campus. Back cover (from left): Toni Johnson, assistant professor of social welfare, gives a lecture. A special education graduate student works with children in a reading class. KU’s Edwards Campus is in Overland Park, Kan. Geology students take core samples in western Kansas.
Distinguished and University Teaching Professors

Schools and departments also appoint teaching professors, some for limited terms. (December 2008.)

Lawrence Campus
Craig Adams, J.L. Constant Distinguished Professor of Civil, Environmental, and Architectural Engineering
Helen Alexander, Chancellors Club Teaching Professor of Ecology and Evolutionary Biology
Robert Antonio, Chancellors Club Teaching Professor of Sociology
Victor Bailey, Charles W. Battey Distinguished Professor of Modern British History
William A. Barnett, Charles W. Oswald Distinguished Professor of Economics
Raj Bhala, Rice Distinguished Professor of Law
George Bittlingmayer, Wagnon Distinguished Professor of Business and Harold Otto Distinguished Professor of Economics
Ronald T. Borchardt, Summerfield Distinguished Professor of Pharmaceutical Chemistry
Kristin Bowman-James, University Distinguished Professor of Chemistry
Daryle H. Busch, Roy A. Roberts Distinguished Professor of Chemistry
Raghumath V. Chaudhari, Deane E. Ackers Distinguished Professor of Chemical and Petroleum Engineering
Shih-I Chu, Watkins Distinguished Professor of Chemistry
Allan J. Cigler, Chancellors Club Teaching Professor of Political Science
Jonathan C.D. Clark, Hall Family Foundation Distinguished Professor of History
George C. Coggins, Frank E. Tyler Distinguished Professor of Law
Bernard Cornet, Charles W. Oswald Distinguished Professor of Microeconomics
Jose Sequeira Costa, Cordelia B. Murphy Distinguished Professor of Piano
David Darwin, Deane E. Ackers Distinguished Professor of Civil, Environmental, and Architectural Engineering
Lynn Davidman, Robert M. Beren Distinguished Professor of Modern Jewish Studies
Richard T. De George, University Distinguished Professor of Philosophy
Amy Devitt, Chancellors Club Teaching Professor of English
Martin B. Dickinson Jr., Robert A. Schroeder Distinguished Professor of Law
Christopher R. Drahozal, John M. Rounds Distinguished Professor of Law
Charles C. Eldredge, Hall Family Foundation Distinguished Professor of History of Art
Steven A. Epstein, Ahmanson-Murphy Distinguished Professor of Medieval History
Joseph B. Evans, Deane E. Ackers Distinguished Professor of Electrical Engineering and Computer Science
Stephen B. Fawcett, Kansas Health Foundation Distinguished Professor of Applied Behavioral Science
H. George Frederickson, Edwin O. Stene Distinguished Professor of Government
Victor S. Frost, Dan F. Servey Distinguished Professor of Electrical Engineering and Computer Science
Robert L. Glicksman, Robert W. Wagstaff Distinguished Professor of Law
Prasad Gogineni, Deane E. Ackers Distinguished Professor of Electrical Engineering and Computer Science
Robert H. Goldstein, Merrill W. Haas Distinguished Professor of Geology
Don W. Green, Deane E. Ackers Distinguished Professor of Chemical and Petroleum Engineering
Susan K. Harris, Joyce and Elizabeth Hall Distinguished Professor of American Literature and Culture
Michael H. Hoeflich, John H. and John M. Kane Distinguished Professor of Law
David S. Holmes, Chancellors Club Teaching Professor of Psychology
Craig L. Huneke, Henry J. Bischoff Distinguished Professor of Mathematics
Susan J. Kemper, Roy A. Roberts Distinguished Professor of Psychology
Barbara Kerr, Williamson Family Distinguished Professor of Counseling Psychology
Dennis D. Lane, N.T. Veatch Distinguished Professor of Civil, Environmental, and Architectural Engineering
Wojciech Lesnikowski, Don Hatch Distinguished Professor of Architecture
Richard E. Levy, J.B. Smith Distinguished Professor of Constitutional Law
Alice Lieberman, Chancellors Club Teaching Professor of Social Welfare
Paul Stephen Lim, Chancellors Club Teaching Professor of English
Susan M. Lunte, Ralph N. Adams Distinguished Professor of Chemistry and Pharmaceutical Chemistry
Craig E. Martin, Chancellors Club Teaching Professor of Ecology and Evolutionary Biology
Keith G. Meyer, E.S. and Tom W. Hampton Distinguished Professor of Law
Elias Michaelis, University Distinguished Professor of Pharmacology and Toxicology
C. Russell Middaugh, Takeru Higuchi Distinguished Professor of Pharmaceutical Chemistry
Lester A. Mitscher, University Distinguished Professor of Medicinal Chemistry
Joane P. Nagel, University Distinguished Professor of Sociology

Photography by University Relations staff: Chuck France, Doug Koch, Jaclyn Lippelmann, Anthony Mattingly, Megan McAtee, and David McKinney.


KU catalogs and other academic publications are online at www.catalogs.ku.edu.
Distinguished & Teaching Professors

Berl R. Oakley, Irving Johnson Distinguished Professor of Molecular Biology
Allan H. Pasco, Hall Family Foundation Distinguished Professor of French and Italian
A. Townsend Peterson, University Distinguished Professor of Ecology and Evolutionary Biology
Blake Peterson, Regents Distinguished Professor of Medicinal Chemistry
Mabel L. Rice, Fred and Virginia Merrill Distinguished Professor of Advanced Studies, Speech-Language-Hearing
Dan Rockhill, J.L. Constant Distinguished Professor of Architecture
Robert Rohrschneider, Sir Robert Worcester Distinguished Professor of Public Opinion and Survey Research
Stanley T. Rolfe, Albert P. Learned Distinguished Professor of Civil, Environmental, and Architectural Engineering
Elinor P. Schroeder, Paul E. Wilson Distinguished Professor of Law
Paul Selden, Gulf-Hedberg Distinguished Professor of Geology
K. Sam Shammugan, Southwestern Bell Distinguished Professor of Electrical Engineering and Computer Science
Prakash P. Shenoy, Ronald G. Harper Distinguished Professor of Business
Paulette Spencer, Deane E. Ackers Distinguished Professor of Mechanical Engineering
Don W. Steeple, Dean A. McGee Distinguished Professor of Geology
Valentino Stella, University Distinguished Professor of Pharmaceutical Chemistry
Bala Subramaniam, Dan F. Servey Distinguished Professor of Chemical and Petroleum Engineering
Karan S. Surana, Deane E. Ackers Distinguished Professor of Mechanical Engineering
Thomas N. Taylor, Roy A. Roberts Distinguished Professor of Ecology and Evolutionary Biology
Barbara N. Timmermann, University Distinguished Professor of Medicinal Chemistry
Ann P. Turnbull, Ross and Marianna Beach Distinguished Professor of Special Education
H. Rutherford Turnbull III, Ross and Marianna Beach Distinguished Professor of Special Education
G. Paul Willhite, Ross H. Forney Distinguished Professor of Chemical and Petroleum Engineering
George S. Wilson, Takeru Higuchi Distinguished Professor of Chemistry and Pharmaceutical Chemistry
Donald E. Worster, Hall Family Foundation Distinguished Professor of History
Judy Wu, University Distinguished Professor of Physics and Astronomy

KU Medical Center Campus
David Albertini, Hall Professor of Molecular Medicine
Marc A. Asher, University Distinguished Professor of Orthopedic Surgery
Richard Barohn, Gertrude and Dewey Ziegler Professor of Neurology
Solomon Batnitzky, Arch Templeton Professor of Radiology
Douglas C. Burton, Marc and Elinor Asher Endowed Professor of Spinal Deformities
Susan E. Carlson, A.J. Rice and Midland Dairy Council Professor of Nutrition
James D. Cook, L.E. and Lenora Carr Phillips Distinguished Professor of Medicine
Carol J. Fabian, Kansas Masonic Cancer Research Chair of Internal Medicine
John A. Ferraro, Carolyn Doughty/Margaret Kemp Chair of Hearing and Speech
Doren Fredrickson, Kansas Health Foundation Distinguished Professor of Preventive Medicine
Jared J. Grantham, University Distinguished Professor of Internal Medicine and Harry Statland Professor of Nephrology
Tomas Griebling, John P. Wolf 33rd Degree Masonic Distinguished Professor of Urology
Jeffrey Holzbeierlein, John W. Weigel Professor of Urology
Douglas V. Horbelt, Daniel K. Roberts Professor of Obstetrics and Gynecology
Joan S. Hunt, University Distinguished Professor of Anatomy and Cell Biology
Roy A. Jensen, William R. Jewell Distinguished Kansas Masonic Professor of Pathology
Curtis D. Klaassen, University Distinguished Professor of Pharmacology
Anthony L. Kovac Jr., Kasumi Arakawa Endowed Professor of Anesthesiology
Joseph L. Kyner, Chancellors Club Teaching Professor of Medicine
Barbara P. Lukert, Mary F. Roberts Distinguished Professor of Nutrition
Joseph F. Lutkenhaus, University Distinguished Professor of Microbiology
Martin A. Mainster, Luther L. Fry Professor of Ophthalmology
William V. McKnelly Jr., Lyle L. and Vivian L. Woodfin Psychiatric Professor
Rajesh Pahwa, Laverne and Joyce Rider Professor of Neurology
Thomas Pazdernik, Chancellors Club Teaching Professor of Pharmacology
Susan K. Pingleton, John A. Ferraro Distinguished Professor of Medicine
Leigh Darryl Quares Jr., Summerfield Endowed Professor of Nephrology
Robert N. Schimke, Chancellors Club Teaching Professor of Internal Medicine
Michael J. Soares, KUMC Distinguished Professor of Pathology
James Brantley Thrasher, William K. Valk Distinguished Professor of Urology
Jinxi Wang, Harrington Professor of Orthopedic Research
Judith Warren, Christine A. Hartley Centennial Professor of Nursing
Carl P. Weiner, Kermit E. Krantz Chair of Gynecology and Obstetrics
David B. Wilson, Delbert D. Neis M.D. Professor of Cardiovascular Diseases
Robert R. Wittler, Wesley Professor of Pediatrics
Douglas C. Woolley, Delos V. Smith Jr. Professor of Community Medicine
Graduate Calendar

Fall Semester 2009
See www.registrar.ku.edu for enrollment dates.

August 20
Classes begin.

*Check with individual Graduate Divisions for the last day for May 2010 doctoral aspirants to take comprehensive oral examinations.

September 3
If a student was enrolled during summer session 2009 and meets all requirements for December 2009 graduation by this date, the student is not required to enroll for fall semester 2009.

September 7
Labor Day. No classes.

October 15
Fall break begins.

October 19
Classes resume.

November 25
Recess begins.

November 30
Classes resume.

*Check with individual Graduate Divisions for the last day for December 2009 master’s and doctoral candidates to take final examinations.

December 10
Last day of classes.

December 14-18
Final examinations.

December 18
Last day for December 2009 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

December 31
December degrees awarded (formally conferred at May 2010 commencement).

Spring Semester 2010
See www.registrar.ku.edu for enrollment dates.

January 14
Classes begin.

*Check with individual Graduate Divisions for the last day for August 2010 doctoral aspirants to take comprehensive oral examinations.

January 18
Martin Luther King Jr. Day. No classes.

January 28
If a student was enrolled during fall semester 2009 and meets all requirements for May 2010 graduation by this date, the student is not required to enroll for spring semester 2010.

February 1
Last day to file applications for Graduate Studies fellowships.

March 15
Spring recess begins.

March 22
Classes resume.

*Check with individual Graduate Divisions for the last day for May 2010 master’s and doctoral candidates to take final examinations.

April 28
Last day for May 2010 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

May 6
Last day of classes.

May 10-14
Final examinations.

May 15 (tentative date)
Doctoral hooding ceremony.

May 16 (projected date)
Commencement.

Summer Session 2010
See www.registrar.ku.edu for enrollment dates.

June 8
Classes begin.

*Check with individual Graduate Divisions for the last date for August 2010 master’s and doctoral candidates to take final examinations.

*Check with individual Graduate Divisions for the last date for December 2010 doctoral aspirants to take comprehensive oral examinations.

June 15
If a student was enrolled during spring semester 2010 and meets all requirements for August 2010 graduation by this date, the student is not required to enroll for summer session 2010.

July 30
Last day for August 2010 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

July 30
Last day of classes.

August 1
August degrees awarded (formally conferred at May 2011 commencement).

Fall Semester 2010
See www.registrar.ku.edu for enrollment dates.

August 19
Classes begin.

*Check with individual Graduate Divisions for the last date for May 2011 doctoral aspirants to take comprehensive oral examinations.

September 2
If a student was enrolled during summer session 2010 and meets all requirements for December 2010 graduation by this date, the student is not required to enroll for fall semester 2010.

September 6
Labor Day. No classes.

October 14
Fall break begins.

October 18
Classes resume.

November 24
Recess begins.

November 29
Classes resume.

*Check with individual Graduate Divisions for the last date for December 2010 master’s and doctoral candidates to take final examinations.

December 9
Last day of classes.

December 13-17
Final examinations.
December 17
Last day for December 2010 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

December 31
December degrees awarded (formally conferred at May 2011 commencement).

Spring Semester 2011
See www.registrar.ku.edu for enrollment dates.

January 21
Classes begin.

*Check with individual Graduate Divisions* for the last date for August 2011 doctoral aspirants to take comprehensive oral examinations.

February 2
Last day to file applications for fellowships.

February 4
If a student was enrolled during fall semester 2010 and meets all requirements for May 2011 graduation by this date, the student is not required to enroll for spring semester 2011.

March 21
Spring recess begins.

March 28
Classes resume.

*Check with individual Graduate Divisions* for the last date for May 2011 master’s and doctoral candidates to take final examinations.

April 27
Last day for May 2011 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

May 12
Last day of classes.

May 16-20
Final examinations.

May 21 (tentative date)
Doctoral hooding ceremony.

May 22 (projected date)
Commencement.

Summer Session 2011
See www.registrar.ku.edu for enrollment dates.

June 7
Classes begin.

*Check with individual Graduate Divisions* for the last date for August 2011 master’s and doctoral candidates to take final examinations.

*Check with individual Graduate Divisions* for the last date for December 2011 doctoral aspirants to take comprehensive oral examinations.

June 14
If a student was enrolled during spring semester 2011 and meets all requirements for August 2011 graduation by this date, the student is not required to enroll for summer session 2011.

July 29
Last day for August 2011 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. No extensions will be granted by Graduate Divisions.

July 29
Last day of classes.

August 1
August degrees awarded (formally conferred at May 2012 commencement).

*Please note* that these dates vary among the schools and are subject to change. Consult the Graduate Division of your school, as well as www.registrar.ku.edu, to confirm all dates.

KU’s academic calendars are online at www.registrar.ku.edu/calendar.

Information about KU commencement ceremonies is online at www commencements.ku.edu.

The Mission of the University of Kansas
The complete Statement of Institutional Mission, as approved by the Kansas Board of Regents, appears in University of Kansas Profiles, available online at www2.ku.edu/~oirp/profiles.shtml, or at the reference desk in Watson Library on the Lawrence campus. It is also available from the University of Kansas, Office of Institutional Research and Planning, Carruth O’Leary Hall, 1246 W. Campus Road, Room 339, Lawrence, KS 66045-7521, (785) 864-4412; and the University of Kansas, Office of the Provost, Strong Hall, 1450 Jayhawk Blvd., Room 250, Lawrence, KS 66045-7518, (785) 864-4904. On the KU Medical Center campus, write or call the Office of the Executive Vice Chancellor, KU Medical Center, 2nd floor, Murphy Administration Bldg., Mail Stop 2015, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1400.

Lawrence
The University of Kansas is a major comprehensive research and teaching university that serves as a center for learning, scholarship, and creative endeavor. The University of Kansas is the only Kansas Regents university to hold membership in the prestigious Association of American Universities, a select group of 62 public and private research universities that represent excellence in graduate and professional education and the highest achievements in research internationally.

The University of Kansas offers the highest-quality undergraduate, professional, and graduate programs as well as outstanding libraries, teaching museums, and information technology. Educational, research, and service programs are offered on the main campus in Lawrence, through the health-related degree programs and services in Kansas City and Wichita, on the University of Kansas Edwards Campus in Overland Park, and at other sites throughout Kansas. More than 100 international study and cooperative research programs are available to students and faculty members.

The university is committed to excellence. It fosters a multicultural environment in which the dignity and rights of the individual are respected. Intellectual diversity, integrity, and disciplined inquiry in the search for knowledge are of paramount importance.

The University of Kansas Medical Center
The University of Kansas Medical Center includes the School of Medicine in Kansas City and Wichita, the Schools of Nursing and Allied Health, the University of Kansas Hospital, and the Office of Graduate Studies in Kansas City. KU Medical Center is committed to serving the health care needs of the citizens of Kansas, the region, and the nation by providing educational opportunities for careers in the health professions, comprehensive services to maintain health and wellness, ongoing support of the state’s and the nation’s health service systems, and continued development of medical knowledge through research and education.
## Directory of Courses

Courses are grouped in categories (English, Industrial Design, Pharmacy Practice, etc.). Abbreviations are based on these category names. Category names are listed first. The college or school that offers the course follows the category name.

<table>
<thead>
<tr>
<th>Name, College or School</th>
<th>Abbr.</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accompanying, Music</td>
<td>ACMP</td>
<td>301</td>
</tr>
<tr>
<td>Accounting, Business</td>
<td>ACCT</td>
<td>77</td>
</tr>
<tr>
<td>Advanced Design Studies, Architecture, Design &amp; Planning</td>
<td>ADS</td>
<td>66</td>
</tr>
<tr>
<td>Advanced Design Studies, Arts</td>
<td>ADSC</td>
<td>277</td>
</tr>
<tr>
<td>Aerospace Engineering, Engineering</td>
<td>AE</td>
<td>124</td>
</tr>
<tr>
<td>African &amp; African-American Studies, Liberal Arts &amp; Sciences</td>
<td>AAAS</td>
<td>158</td>
</tr>
<tr>
<td>American Studies, Liberal Arts &amp; Sciences</td>
<td>AMS</td>
<td>162</td>
</tr>
<tr>
<td>Anatomy &amp; Cell Biology, Medicine</td>
<td>ANAT</td>
<td>281</td>
</tr>
<tr>
<td>Anthropology, Liberal Arts &amp; Sciences</td>
<td>ANTH</td>
<td>163</td>
</tr>
<tr>
<td>Applied Behavioral Science, Liberal Arts &amp; Sciences</td>
<td>ABSC</td>
<td>167</td>
</tr>
<tr>
<td>Architectural Engineering, Engineering</td>
<td>ARCE</td>
<td>133</td>
</tr>
<tr>
<td>Architecture, Architecture, Design &amp; Planning</td>
<td>ARCH</td>
<td>63</td>
</tr>
<tr>
<td>Art, Arts</td>
<td>ART</td>
<td>276</td>
</tr>
<tr>
<td>Astronomy, Liberal Arts &amp; Sciences</td>
<td>ASTR</td>
<td>239</td>
</tr>
<tr>
<td>Atmospheric Science, Liberal Arts &amp; Sciences</td>
<td>ATMOS</td>
<td>204</td>
</tr>
<tr>
<td>Audiology, Allied Health</td>
<td>AUD</td>
<td>44</td>
</tr>
<tr>
<td>Band, Music</td>
<td>BAND</td>
<td>306</td>
</tr>
<tr>
<td>Bassoon, Music</td>
<td>BASN</td>
<td>303</td>
</tr>
<tr>
<td>Biochemistry &amp; Molecular Biology, Medicine</td>
<td>BCHM</td>
<td>283</td>
</tr>
<tr>
<td>Bioengineering, Engineering</td>
<td>BIOE</td>
<td>127</td>
</tr>
<tr>
<td>Bioinformatics, Liberal Arts &amp; Sciences</td>
<td>BINF</td>
<td>172</td>
</tr>
<tr>
<td>Biological Sciences, Liberal Arts &amp; Sciences</td>
<td>BIOL</td>
<td>177</td>
</tr>
<tr>
<td>Bosnian/Croatian/Serbian, Liberal Arts &amp; Sciences</td>
<td>BCRS</td>
<td>261</td>
</tr>
<tr>
<td>Brass, Music</td>
<td>BRSS</td>
<td>301</td>
</tr>
<tr>
<td>Business, Business</td>
<td>BUS</td>
<td>78</td>
</tr>
<tr>
<td>Business Economics, Business</td>
<td>BE</td>
<td>79</td>
</tr>
<tr>
<td>Business Law, Business</td>
<td>BLAW</td>
<td>79</td>
</tr>
<tr>
<td>Carillon, Music</td>
<td>CARI</td>
<td>301</td>
</tr>
<tr>
<td>Ceramics, Arts</td>
<td>CER</td>
<td>277</td>
</tr>
<tr>
<td>Chamber Music, Music</td>
<td>CHAM</td>
<td>302</td>
</tr>
<tr>
<td>Chemical &amp; Petroleum Engineering, Engineering</td>
<td>C&amp;PE</td>
<td>131</td>
</tr>
<tr>
<td>Chemistry, Liberal Arts &amp; Sciences</td>
<td>CHEM</td>
<td>182</td>
</tr>
<tr>
<td>Chinese, Liberal Arts &amp; Sciences</td>
<td>CHIN</td>
<td>194</td>
</tr>
<tr>
<td>Choral Music, Music</td>
<td>CHOR</td>
<td>306</td>
</tr>
<tr>
<td>Church Music, Music</td>
<td>CHUR</td>
<td>301</td>
</tr>
<tr>
<td>Civil Engineering, Engineering</td>
<td>CE</td>
<td>134</td>
</tr>
<tr>
<td>Clarinet, Music</td>
<td>CLAR</td>
<td>303</td>
</tr>
<tr>
<td>Classics, Liberal Arts &amp; Sciences</td>
<td>CLSX</td>
<td>186</td>
</tr>
<tr>
<td>Clinical Laboratory Sciences, Allied Health</td>
<td>CLS</td>
<td>43</td>
</tr>
<tr>
<td>Communication Studies, Liberal Arts &amp; Sciences</td>
<td>COMS</td>
<td>188</td>
</tr>
<tr>
<td>Conducting, Music</td>
<td>COND</td>
<td>307</td>
</tr>
<tr>
<td>Construction Management, Engineering</td>
<td>CMGT</td>
<td>136</td>
</tr>
<tr>
<td>Curriculum &amp; Teaching, Education</td>
<td>C&amp;T</td>
<td>96</td>
</tr>
<tr>
<td>Czech, Liberal Arts &amp; Sciences</td>
<td>CZCH</td>
<td>261</td>
</tr>
<tr>
<td>Dance, Arts</td>
<td>DANC</td>
<td>271</td>
</tr>
<tr>
<td>Decision Sciences, Business</td>
<td>DSCI</td>
<td>79</td>
</tr>
<tr>
<td>Dietetics &amp; Nutrition, Allied Health &amp; Sciences</td>
<td>DN, DIET</td>
<td>45</td>
</tr>
<tr>
<td>Double Bass, Music</td>
<td>DBBS</td>
<td>302</td>
</tr>
<tr>
<td>Drawing, Arts</td>
<td>DRWG</td>
<td>276</td>
</tr>
<tr>
<td>East Asian Languages &amp; Cultures, Liberal Arts &amp; Sciences</td>
<td>EALC</td>
<td>194</td>
</tr>
<tr>
<td>Economics, Liberal Arts &amp; Sciences</td>
<td>ECON</td>
<td>196</td>
</tr>
<tr>
<td>Educational Leadership &amp; Policy Studies, Education</td>
<td>ELPS</td>
<td>101</td>
</tr>
<tr>
<td>Electrical Engineering &amp; Computer Science, Engineering</td>
<td>EECS</td>
<td>139</td>
</tr>
<tr>
<td>Engineering, Engineering</td>
<td>ENGR</td>
<td>145</td>
</tr>
<tr>
<td>Engineering Management, Engineering</td>
<td>EMGT</td>
<td>144</td>
</tr>
<tr>
<td>Engineering Physics, Engineering</td>
<td>EPHX</td>
<td>145</td>
</tr>
<tr>
<td>English, Liberal Arts &amp; Sciences</td>
<td>ENGL</td>
<td>200</td>
</tr>
<tr>
<td>Entrepreneurship, Business</td>
<td>ENTR</td>
<td>80</td>
</tr>
<tr>
<td>Environmental Studies, Liberal Arts &amp; Sciences</td>
<td>EVRN</td>
<td>181</td>
</tr>
<tr>
<td>Euphonium, Music</td>
<td>EUPH</td>
<td>301</td>
</tr>
<tr>
<td>European Studies, Liberal Arts &amp; Sciences</td>
<td>EURS</td>
<td>201</td>
</tr>
<tr>
<td>Expanded Media, Arts</td>
<td>EXM</td>
<td>176</td>
</tr>
<tr>
<td>Film &amp; Media Studies, Arts</td>
<td>FMS</td>
<td>172</td>
</tr>
<tr>
<td>Finance, Business</td>
<td>FIN</td>
<td>80</td>
</tr>
<tr>
<td>Flute, Music</td>
<td>FLUT</td>
<td>303</td>
</tr>
<tr>
<td>French, Liberal Arts &amp; Sciences</td>
<td>FREN</td>
<td>202</td>
</tr>
<tr>
<td>French Horn, Music</td>
<td>FRHN</td>
<td>303</td>
</tr>
<tr>
<td>Geography, Liberal Arts &amp; Sciences</td>
<td>GEOG</td>
<td>205</td>
</tr>
<tr>
<td>Geology, Liberal Arts &amp; Sciences</td>
<td>GEOL</td>
<td>208</td>
</tr>
<tr>
<td>German, Liberal Arts &amp; Sciences</td>
<td>GERM</td>
<td>210</td>
</tr>
<tr>
<td>Global Indigenous Nations Studies, Liberal Arts &amp; Sciences</td>
<td>GINS</td>
<td>214</td>
</tr>
<tr>
<td>Graduate Studies, Graduate Studies</td>
<td>GS</td>
<td>39</td>
</tr>
<tr>
<td>Graduate Studies, KUMC, Graduate Studies</td>
<td>GSMC</td>
<td>40</td>
</tr>
<tr>
<td>Greek, Liberal Arts &amp; Sciences</td>
<td>GRK</td>
<td>186</td>
</tr>
<tr>
<td>Haitian, Liberal Arts &amp; Sciences</td>
<td>HAIT</td>
<td>161</td>
</tr>
<tr>
<td>Harp, Music</td>
<td>HARP</td>
<td>302</td>
</tr>
<tr>
<td>Harpsichord, Music</td>
<td>HPCD</td>
<td>301</td>
</tr>
<tr>
<td>Health, Sport, &amp; Exercise Sciences, Education</td>
<td>HSES</td>
<td>104</td>
</tr>
<tr>
<td>Health Information Management, Allied Health</td>
<td>HEIM</td>
<td>47</td>
</tr>
<tr>
<td>Health Policy &amp; Management, Medicine</td>
<td>HP&amp;M</td>
<td>285</td>
</tr>
<tr>
<td>History, Liberal Arts &amp; Sciences</td>
<td>HIST</td>
<td>217</td>
</tr>
<tr>
<td>History &amp; Philosophy of Medicine, Medicine</td>
<td>H&amp;PM</td>
<td>287</td>
</tr>
<tr>
<td>History of Art, Liberal Arts &amp; Sciences</td>
<td>HA</td>
<td>221</td>
</tr>
<tr>
<td>Humanities &amp; Western Civilization, Liberal Arts &amp; Sciences</td>
<td>HWC</td>
<td>222</td>
</tr>
<tr>
<td>Industrial Design, Architecture, Design &amp; Planning</td>
<td>INDD</td>
<td>67</td>
</tr>
<tr>
<td>Information Systems, Business</td>
<td>IST</td>
<td>81</td>
</tr>
<tr>
<td>Interior Design, Architecture, Design &amp; Planning</td>
<td>INTD</td>
<td>67</td>
</tr>
<tr>
<td>International Business, Business</td>
<td>IBUS</td>
<td>82</td>
</tr>
<tr>
<td>International Studies, Liberal Arts &amp; Sciences</td>
<td>INTL</td>
<td>224</td>
</tr>
<tr>
<td>Italian, Liberal Arts &amp; Sciences</td>
<td>ITAL</td>
<td>203</td>
</tr>
<tr>
<td>Japanese, Liberal Arts &amp; Sciences</td>
<td>JPN</td>
<td>195</td>
</tr>
<tr>
<td>Jazz, Music</td>
<td>JAZZ</td>
<td>307</td>
</tr>
<tr>
<td>Jewish Studies, Liberal Arts &amp; Sciences</td>
<td>JWSH</td>
<td>258</td>
</tr>
</tbody>
</table>

The University of Kansas is the only school in Kansas belonging to the Association of American Universities, a select group of 62 leading higher education institutions in the United States and Canada. Member institutions are chosen on the basis of their national significance in graduate studies and research.

The University of Kansas is accredited by the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602, (800) 621-7440.
<table>
<thead>
<tr>
<th>Name, College or School</th>
<th>Abbr.</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalism, Journalism &amp; Mass Communications</td>
<td>JOUR</td>
<td>151</td>
</tr>
<tr>
<td>Korean, Liberal Arts &amp; Sciences</td>
<td>KOR</td>
<td>195</td>
</tr>
<tr>
<td>Latin, Liberal Arts &amp; Sciences</td>
<td>LAT</td>
<td>186</td>
</tr>
<tr>
<td>Latin American Area Studies, Liberal Arts &amp; Sciences</td>
<td>LAAS</td>
<td>226</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences, Liberal Arts &amp; Sciences</td>
<td>LA&amp;S</td>
<td>227</td>
</tr>
<tr>
<td>Linguistics, Liberal Arts &amp; Sciences</td>
<td>LING</td>
<td>228</td>
</tr>
<tr>
<td>Management &amp; Leadership, Business</td>
<td>MGMT</td>
<td>83</td>
</tr>
<tr>
<td>Marketing, Business</td>
<td>MKTG</td>
<td>85</td>
</tr>
<tr>
<td>Mathematics, Liberal Arts &amp; Sciences</td>
<td>MATH</td>
<td>231</td>
</tr>
<tr>
<td>Mechanical Engineering, Engineering</td>
<td>ME</td>
<td>147</td>
</tr>
<tr>
<td>Medicinal Chemistry, Pharmacy</td>
<td>MDCM</td>
<td>328</td>
</tr>
<tr>
<td>Metallurgy/Jewelry, Arts</td>
<td>METL</td>
<td>277</td>
</tr>
<tr>
<td>Microbiology, Molecular Genetics, &amp; Immunology, Medicine</td>
<td>MICR</td>
<td>287</td>
</tr>
<tr>
<td>Molecular &amp; Integrative Physiology, Medicine</td>
<td>PHSL</td>
<td>288</td>
</tr>
<tr>
<td>Museum Studies, Liberal Arts</td>
<td>MUSE</td>
<td>233</td>
</tr>
<tr>
<td>Music, Music</td>
<td>MUS</td>
<td>299</td>
</tr>
<tr>
<td>Music Education &amp; Music Therapy, Music</td>
<td>MEMT</td>
<td>308</td>
</tr>
<tr>
<td>Music Theory &amp; Composition, Music</td>
<td>MTHC</td>
<td>305</td>
</tr>
<tr>
<td>Musicology, Music</td>
<td>MUSC</td>
<td>305</td>
</tr>
<tr>
<td>Neurosciences, Pharmacy</td>
<td>NURO</td>
<td>331</td>
</tr>
<tr>
<td>Nurse Anesthesia, Allied Health</td>
<td>NURA</td>
<td>48</td>
</tr>
<tr>
<td>Nursing, Nursing</td>
<td>NSRG</td>
<td>319</td>
</tr>
<tr>
<td>Oboe, Music</td>
<td>OBOE</td>
<td>303</td>
</tr>
<tr>
<td>Occupational Therapy, M.O.T., Allied Health</td>
<td>OCTH</td>
<td>50</td>
</tr>
<tr>
<td>Occupational Therapy, M.S., Allied Health</td>
<td>OTMS</td>
<td>53</td>
</tr>
<tr>
<td>Occupational Therapy, O.T.D., Allied Health</td>
<td>OTD</td>
<td>51</td>
</tr>
<tr>
<td>Orchestra, Music</td>
<td>ORCH</td>
<td>307</td>
</tr>
<tr>
<td>Organ, Music</td>
<td>ORGN</td>
<td>301</td>
</tr>
<tr>
<td>Painting, Arts</td>
<td>PNTG</td>
<td>276</td>
</tr>
<tr>
<td>Pathology &amp; Laboratory Medicine, Medicine</td>
<td>PATH</td>
<td>290</td>
</tr>
<tr>
<td>Peace &amp; Conflict Studies, Liberal Arts &amp; Sciences</td>
<td>PCS</td>
<td>222</td>
</tr>
<tr>
<td>Percussion, Music</td>
<td>PCUS</td>
<td>304</td>
</tr>
<tr>
<td>Percussion Ensemble, Music</td>
<td>PENS</td>
<td>307</td>
</tr>
<tr>
<td>Pharmaceutical Chemistry, Pharmacy</td>
<td>PHCH</td>
<td>333</td>
</tr>
<tr>
<td>Pharmacology, Medicine</td>
<td>PHCL</td>
<td>291</td>
</tr>
<tr>
<td>Pharmacology &amp; Toxicology, Pharmacy</td>
<td>P&amp;TX</td>
<td>335</td>
</tr>
<tr>
<td>Pharmacy Practice, Pharmacy</td>
<td>PHPR</td>
<td>326</td>
</tr>
<tr>
<td>Philosophy, Liberal Arts &amp; Sciences</td>
<td>PHIL</td>
<td>236</td>
</tr>
<tr>
<td>Photomedia, Architecture, Design &amp; Planning</td>
<td>PHMD</td>
<td>67</td>
</tr>
<tr>
<td>Physical Therapy &amp; Rehabilitation Science, Allied Health</td>
<td>PTRS</td>
<td>56</td>
</tr>
<tr>
<td>Physics, Liberal Arts &amp; Sciences</td>
<td>PHSX</td>
<td>239</td>
</tr>
<tr>
<td>Physiology, Molecular &amp; Integrative, Medicine</td>
<td>PHSL</td>
<td>288</td>
</tr>
<tr>
<td>Piano, Music</td>
<td>PIAN</td>
<td>302</td>
</tr>
<tr>
<td>Polish, Liberal Arts &amp; Sciences</td>
<td>PLSH</td>
<td>261</td>
</tr>
<tr>
<td>Political Science, Liberal Arts &amp; Sciences</td>
<td>POLS</td>
<td>242</td>
</tr>
<tr>
<td>Portuguese, Liberal Arts &amp; Sciences</td>
<td>PORT</td>
<td>265</td>
</tr>
<tr>
<td>Preventive Medicine &amp; Public Health, Medicine</td>
<td>PRVM</td>
<td>293</td>
</tr>
<tr>
<td>Printmaking, Arts</td>
<td>PRNT</td>
<td>276</td>
</tr>
<tr>
<td>Psychology, Liberal Arts &amp; Sciences</td>
<td>PSYC</td>
<td>248</td>
</tr>
<tr>
<td>Psychology &amp; Research in Education, Education</td>
<td>PRE</td>
<td>11</td>
</tr>
<tr>
<td>Public Administration, Liberal Arts &amp; Sciences</td>
<td>PUAD</td>
<td>255</td>
</tr>
<tr>
<td>Religious Studies, Liberal Arts &amp; Sciences</td>
<td>REL</td>
<td>258</td>
</tr>
<tr>
<td>Russian, Liberal Arts &amp; Sciences</td>
<td>RUS</td>
<td>261</td>
</tr>
<tr>
<td>Russian, East European, &amp; Eurasian Studies, Liberal Arts &amp; Sciences</td>
<td>REES</td>
<td>260</td>
</tr>
<tr>
<td>Saxophone, Music</td>
<td>SAXO</td>
<td>304</td>
</tr>
<tr>
<td>Scandinavian, Liberal Arts &amp; Sciences</td>
<td>SCAN</td>
<td>211</td>
</tr>
<tr>
<td>Sculpture, Arts</td>
<td>SCUL</td>
<td>277</td>
</tr>
<tr>
<td>Slavic Languages &amp; Literatures, Liberal Arts &amp; Sciences</td>
<td>SLAV</td>
<td>261</td>
</tr>
<tr>
<td>Social Welfare, Social Welfare</td>
<td>SW</td>
<td>343</td>
</tr>
<tr>
<td>Sociology, Liberal Arts &amp; Sciences</td>
<td>SOC</td>
<td>263</td>
</tr>
<tr>
<td>Spanish, Liberal Arts &amp; Sciences</td>
<td>SPAN</td>
<td>266</td>
</tr>
<tr>
<td>Special Education, Education</td>
<td>SPED</td>
<td>115</td>
</tr>
<tr>
<td>Speech-Language-Hearing: Sciences &amp; Disorders, Liberal Arts &amp; Sciences</td>
<td>SPLH</td>
<td>191</td>
</tr>
<tr>
<td>Strings, Music</td>
<td>STRG</td>
<td>302</td>
</tr>
<tr>
<td>Supply Chain Management, Business</td>
<td>SCM</td>
<td>86</td>
</tr>
<tr>
<td>Textile Design, Arts</td>
<td>TD</td>
<td>277</td>
</tr>
<tr>
<td>Theatre, Arts</td>
<td>THR</td>
<td>274</td>
</tr>
<tr>
<td>Therapeutic Science, Allied Health</td>
<td>TS</td>
<td>54</td>
</tr>
<tr>
<td>Toxicology, Medicine</td>
<td>PTOX</td>
<td>292</td>
</tr>
<tr>
<td>Trombone, Music</td>
<td>TROM</td>
<td>301</td>
</tr>
<tr>
<td>Trumpet, Music</td>
<td>TRUM</td>
<td>301</td>
</tr>
<tr>
<td>Tuba, Music</td>
<td>TUBA</td>
<td>301</td>
</tr>
<tr>
<td>Turkish, Liberal Arts &amp; Sciences</td>
<td>TURK</td>
<td>262</td>
</tr>
<tr>
<td>Ukrainian, Liberal Arts &amp; Sciences</td>
<td>UKRA</td>
<td>262</td>
</tr>
<tr>
<td>Urban Planning, Architecture, Design &amp; Planning</td>
<td>UBPL</td>
<td>69</td>
</tr>
<tr>
<td>Viola, Music</td>
<td>VIOA</td>
<td>303</td>
</tr>
<tr>
<td>Violin, Music</td>
<td>VION</td>
<td>303</td>
</tr>
<tr>
<td>Violoncello, Music</td>
<td>VNCL</td>
<td>303</td>
</tr>
<tr>
<td>Visual Art Education, Arts</td>
<td>VAE</td>
<td>278</td>
</tr>
<tr>
<td>Visual Communication, Architecture, Design &amp; Planning</td>
<td>VISC</td>
<td>67</td>
</tr>
<tr>
<td>Voice, Music</td>
<td>VOIC</td>
<td>304</td>
</tr>
<tr>
<td>Wind &amp; Percussion, Music</td>
<td>W&amp;P</td>
<td>304</td>
</tr>
<tr>
<td>Wind Ensemble, Music</td>
<td>WENS</td>
<td>307</td>
</tr>
<tr>
<td>Women, Gender, &amp; Sexuality Studies, Liberal Arts &amp; Sciences</td>
<td>WGSS</td>
<td>268</td>
</tr>
</tbody>
</table>


KU has 42 nationally ranked programs — 15 in the top 10 among public universities — according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
General Information

Contents

The University Communities & Campuses ........................................... 10
- Lawrence .............................................................. 10
- Kansas City & KU Medical Center ........................................ 10
- KU Edwards Campus, Overland Park ....................................... 10

University Service to the State ...................................................... 10

International Awareness ................................................................ 11

University Policy on Diversity of the Student Body ....................... 11

Nondiscrimination, Equal Opportunity, & Affirmative Action Policy ........................................... 11

Admission ................................................................................. 12
- Degree-Seeking Admission ................................................... 12
- Nondegree-Seeking Admission .............................................. 12
- Admission Procedure .......................................................... 12
- Limitations on Admission ..................................................... 13
- Minimum English Proficiency Requirements for Admission to a Graduate Program .................. 13

Degrees ..................................................................................... 14
- Master's Degrees .............................................................. 14
  - Master of Arts & Master of Science ..................................... 14
  - M.A. & M.S. with a Major in Special Studies ....................... 14
  - Professional Master's Degrees ........................................... 14
- Master's Degree Programs .................................................... 14
  - Combined Degrees .......................................................... 15
- Specialist in Education ........................................................ 15
- Doctoral Degrees ............................................................... 15
  - Doctor of Philosophy ........................................................ 15
  - P. D. with a Major in Special Studies .................................. 15
  - Doctor of Audiology .......................................................... 15
  - Doctor of Education ......................................................... 16
  - Doctor of Engineering ....................................................... 16
  - Doctor of Musical Arts ...................................................... 16
  - Doctor of Nursing Practice ................................................ 16
  - Doctor of Occupational Therapy ....................................... 16
  - Doctor of Physical Therapy ............................................... 16
- Doctoral Degree Programs ....................................................... 16

Graduate Certificate Programs ..................................................... 17
- Eligibility & Admission Criteria .............................................. 17
- Approved Graduate Certificate Programs ................................. 17

Master's Degree Requirements ................................................... 17
- Program Time Constraints .................................................... 17
- M.A. & M.S. Degrees .......................................................... 17
- M.A. & M.S. with a Major in Special Studies ............................ 18
- Combined Medical & Master's Degrees ................................. 18

Doctoral Degree Requirements .................................................. 18
- Doctor of Philosophy .......................................................... 18
  - 1. Application & Admission .............................................. 18
  - 2. Program Time Constraints .............................................. 18
  - 3. Research Skills .............................................................. 19
  - 4. Comprehensive Oral Examination .................................... 19
  - 5. Candidacy ................................................................. 20
  - 6. Dissertation ............................................................... 20
  - 7. Final Oral Examination .................................................. 21
  - 8. Dissertation Submission & Publication ............................. 21
  - Ph.D. with a Major in Special Studies .................................... 21
  - Combined Medical & Doctoral Degrees ............................. 22

Posthumous Degrees ................................................................. 22

Special Sessions & Programs ....................................................... 22
- Extramural (Off-Campus) Graduate Study ............................. 22
- Continuing Education Classes & Centers ............................... 22
- Independent Study/Distance Learning ................................... 22
- Interinstitutional Programs & Studies ..................................... 22
- International Programs ....................................................... 22

General Regulations .................................................................. 23
- Academic Probation ............................................................ 23
- Course Numbering System ................................................... 23
- Credit by Examination ....................................................... 23
- Credit by Transfer .............................................................. 23
- Enrollment ............................................................................ 24
  - Regular Enrollment ........................................................ 24
  - Leave of Absence ............................................................ 24
  - Dismissed ........................................................................... 24
- Grading ................................................................................. 24
- Graduate Credit ................................................................. 25
- Grievances .......................................................................... 25
- Intellectual Property Policy ................................................... 25
- Language Requirements ....................................................... 25
- Leave of Absence ............................................................... 25
- Seniors & Graduate Study (Coenrollment) ............................. 25
- Special Conditions for Specified Types of Research ............... 26
- Student Responsibilities ....................................................... 26
- Time Limit on Graduate Courses ......................................... 26
- Undergraduate Student Enrollment ....................................... 26
- University Faculty & Advanced Degrees ............................... 26
- Withdrawal from a Course .................................................. 26
- Withdrawal from the University .......................................... 26

Tuition & Fees ........................................................................... 27
- Late Enrollment Fee ........................................................... 27
- Residency Requirements ...................................................... 27
- Books & Supplies ............................................................... 27
- Reciprocal Agreements ........................................................ 27

Financial Aid ............................................................................. 27
- Loans .................................................................................... 27
- Tuition Payment ................................................................. 27
- Graduate Assistantships ...................................................... 27
  - Graduate Teaching Assistantships ..................................... 27
  - Graduate Research Assistantships .................................... 28
- Summer Session Enrollment Requirements .......................... 29
- Health Insurance ............................................................... 29
- Non-Native Speakers of English .......................................... 29
- Other Employment Opportunities ........................................ 29

Student Services ....................................................................... 29
- Graduate Student Associations ............................................. 29
- Health Services & Immunizations ........................................ 29
- Housing .............................................................................. 30
- University Libraries ............................................................ 30
- Lawrence Campus Services .................................................. 31
- KU Medical Center Campus Services .................................... 32
- KU Edwards Campus Services ............................................. 33

Graduate Studies is in Strong Hall, 1450 Jayhawk Blvd., Room 213, Lawrence, KS 66045-7518, www.graduate.ku.edu.

KU Medical Center Graduate Studies is at 5015 Wescoe Pavilion, Mail Stop 1040, 3901 Rainbow Blvd., Kansas City, KS 66160, telephone: (913) 588-1258, www2.kumc.edu/aa/gradstudies.

KU's academic calendars are online at www.registrar.ku.edu/calendar.
The University of Kansas has educational, research, and service centers throughout Kansas—including the central campus in Lawrence, the Medical Center campus in Kansas City, and the Edwards Campus in Overland Park in the Kansas City metropolitan area. There is a clinical campus of the School of Medicine in Wichita and a public administration program in Topeka, the state capital. KU’s Institute for Life Span Studies has facilities in Lawrence, Parsons, and Kansas City.

Lawrence

KU’s central campus is in Lawrence, Kansas, a youthful, thriving community with a population of more than 90,000. The campus is in the heart of the city on a ridge called Mount Oread. The tree-lined main downtown district a few blocks from campus has an abundance of small specialty shops. Other shopping centers are nearby. The community has 32 public parks, three community swimming pools, an arts center, a public library, a community center, and active community education and recreation programs. The Lawrence Community Theatre, Lawrence Chamber Orchestra, and Seem-to-Be Players children’s theatre group present music and theatre events. The Lawrence Arts Center offers classes in arts, crafts, music, dance, and other subjects for children and adults, as well as gallery shows. Local galleries sponsor art exhibits.

Lawrence Campus. The 1,000-acre Lawrence campus has 100 major buildings. See the Campus Buildings Directory, www.buildings.ku.edu, for a complete list of academic, research, athletic, and residence facilities. New facilities on KU’s west campus include the Multidisciplinary Research Building, completed in 2006, and the Structural Biology Center, completed in 2008. Together, these adjacent laboratory buildings added 150,000 square feet of new research space at KU. The facilities support 250 faculty, staff, postdocs, and graduate students on grant-funded research in medicinal chemistry, pharmaceutical chemistry, and other disciplines.

Ground was broken in May 2009 for an 110,000-square-foot School of Pharmacy building on KU’s west campus that will house teaching facilities and administrative offices. It was funded by $50 million in bonds from the state of Kansas that includes about $4.5 million for an addition for the pharmacy school on the Wichita campus. KU plans to build additional research, teaching, and business incubation space on west campus during the coming decade.

Other recent projects include expansion of Hilltop Child Development Center and renovation of Wescoe Hall. A $55-million renovation is under way at the Allen Fieldhouse complex; it is expected to be completed in 2009.

Kansas City and KU Medical Center

Metropolitan Kansas City, about 45 minutes from Lawrence by interstate highway, encompasses seven counties and 50 municipalities in two states. Kansas City International Airport provides easy access to the area, and interstate highways provide access to 12 lakes, more than 140 parks, and various vacation and resort areas. Popular attractions include the Kansas City Jazz Museum, Nelson-Atkins Museum of Art, Kansas City Art Institute, Union Station, Science City, and Kansas City Museum of History and Science. Sports fans enjoy NASCAR racing, Kansas City Royals baseball, and Kansas City Chiefs football.

KU Medical Center. The KU School of Medicine began in 1905 with a merger of three proprietary medical schools to form a four-year school directed by the university. By 1924, the institution had outgrown its original location, and the first building on the present campus was occupied. KU Medical Center is involved with teaching, patient care, medical research, and community service. There are 764 full- and part-time faculty members, more than 2,600 students, and 2,700 employees. KUMC is centrally located in the metropolitan Kansas City area. It offers educational programs through the Schools of Allied Health, Medicine, and Nursing, and the Office of Graduate Studies. Visit KUMC online at www.kumc.edu.

KU Edwards Campus, Overland Park

KU offers a variety of graduate and undergraduate programs on the KU Edwards Campus in Overland Park, Kansas. The campus offers late-afternoon and evening classes, catering to those employed full time. The campus has recently expanded, adding a new classroom building that more than doubles the space and a student union featuring an expanded KU Bookstore, Wi-Fi environment, and outdoor seating terrace. The Student Success Center provides on-site services from the Academic Achievement and Access Center/Disability Resources, Writing Center, and University Career Center. For more information, call the Edwards Campus at 864-8400 from Lawrence or (913) 897-8400 from other locations. Visit the Edwards Campus online at http://edwardscampus.ku.edu.

University Service to the State

KU serves the state by providing support for education at all levels; gathering and analyzing information for state government, business, industry, and citizenry; providing formal and informal educational and cultural opportunities for all Kansans; and providing professionals to meet Kansas’ workforce needs.

Many service functions are offered through the libraries, museums, and research agencies at KU. Each of these agencies is involved in making its resources and the information it gains from research available to the people of Kansas. Other services
are provided through the conferences, independent study courses, and special programs of the Division of Continuing Education in cooperation with other academic units. More than 75,000 Kansans participate each year in continuing education activities.

KU brings to the state a variety of events, including intercollegiate athletics, theatre and dance performances, concerts, and radio and television programming. Many special projects of benefit to Kansans are extensions of the teaching, research, and creative activities of the university. Representatives from virtually every academic division of KU are engaged in lectures for special interest and community groups, workshops for Kansas professionals, and research to improve the quality of life in Kansas.

International Awareness
The University of Kansas believes that the increasing interdependence of the world highlights the importance of an internationally diverse student body. KU has been named one of only five universities in the nation to receive the 2005 Senator Paul Simon Award for Campus Internationalization from NAPSA: Association of International Educators. International students enrich the intellectual and cultural life of the university. Interactions between students from abroad and U.S. students and faculty members are valuable opportunities for all involved to grow in cross-cultural understanding and develop greater awareness of the world’s cultures, ideas, and nationalities.

University Policy on Diversity of the Student Body
The University of Kansas values diversity in its student body and believes that the intentional creation of a diverse learning environment is essential to achieving the university’s educational mission. The university fosters a multicultural environment in which the dignity and rights of the individual are respected.

To build a diverse community, the university considers, in addition to academic credentials, the following criteria for student admission decisions, scholarship recognition, and program participation. While each factor is significant, no one factor will be considered determinative in the decision process:

- Bilingual or multilingual abilities
- Cultural background
- Ethnicity
- Evidence of commitment to diversity
- Evidence of leadership skills
- First-generation college student
- Geographic diversity
- Financial, social, family, physical, or educational hardships
- Previous career before pursuing higher education
- Race
- Service to community
- Socio-economic status
- Urban/rural background
- Other unique contributions

This policy was approved by Chancellor Robert E. Hemenway on April 9, 2004, and applies to all University of Kansas campuses.

KU brings to the state a variety of events, including intercollegiate athletics, theatre and dance performances, concerts, and radio and television programming. Many special projects of benefit to Kansans are extensions of the teaching, research, and creative activities of the university. Representatives from virtually every academic division of KU are engaged in lectures for special interest and community groups, workshops for Kansas professionals, and research to improve the quality of life in Kansas.

International Awareness
The University of Kansas believes that the increasing interdependence of the world highlights the importance of an internationally diverse student body. KU has been named one of only five universities in the nation to receive the 2005 Senator Paul Simon Award for Campus Internationalization from NAPSA: Association of International Educators. International students enrich the intellectual and cultural life of the university. Interactions between students from abroad and U.S. students and faculty members are valuable opportunities for all involved to grow in cross-cultural understanding and develop greater awareness of the world’s cultures, ideas, and nationalities.

University Policy on Diversity of the Student Body
The University of Kansas values diversity in its student body and believes that the intentional creation of a diverse learning environment is essential to achieving the university’s educational mission. The university fosters a multicultural environment in which the dignity and rights of the individual are respected.

To build a diverse community, the university considers, in addition to academic credentials, the following criteria for student admission decisions, scholarship recognition, and program participation. While each factor is significant, no one factor will be considered determinative in the decision process:

- Bilingual or multilingual abilities
- Cultural background
- Ethnicity
- Evidence of commitment to diversity
- Evidence of leadership skills
- First-generation college student
- Geographic diversity
- Financial, social, family, physical, or educational hardships
- Previous career before pursuing higher education
- Race
- Service to community
- Socio-economic status
- Urban/rural background
- Other unique contributions

This policy was approved by Chancellor Robert E. Hemenway on April 9, 2004, and applies to all University of Kansas campuses.

Nondiscrimination, Equal Opportunity, and Affirmative Action Policy
The University of Kansas prohibits discrimination on the basis of race, color, religion, sex, national origin, age, ancestry, and disability and veteran status, in accordance with state and federal law. The university also prohibits discrimination on the basis of sexual orientation, marital status, and parental status as a matter of policy. Discrimination is prohibited in employment and all educational programs and activities of the university and its affiliates. Sexual, racial, and ethnic harassment are forms of discrimination that are also expressly prohibited by university policy.

KU is committed to taking affirmative action in employment and education programs for underutilized group members and protected class citizens. The university also is committed to providing equal opportunity in all aspects of education and employment. Full texts of university policies on nondiscrimination, equal opportunity and affirmative action, sexual harassment, and racial and ethnic harassment are available at www.hreo.ku.edu/policies_procedures/eo_ga_policies.

Inquiries regarding the affirmative action program, equal opportunity policy, nondiscrimination policy, and reports or allegations of discrimination or harassment on the Lawrence campus should be made to Steve Ramirez, Department of Human Resources and Equal Opportunity, Carruth-O’Leary Hall, 1246 W. Campus Rd., Room 103, Lawrence, KS 66045-7521, (785) 864-3686, www.hreo.ku.edu. On the KU Medical Center campus, contact Jayne Owen, director, Equal Opportunity Office, KU Medical Center, 1040 Wescoe, Mail Stop 2014, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1206, (913) 588-7963 (TDD), www.kumc.edu/eoo.

KU catalogs are available in alternate format upon request. Contact Melissa Manning, (785) 864-2620 (v/TTY), manning@ku.edu, in Lawrence; or Carol Wagner, (913) 588-7813 (V) or (913) 588-7963 (TDD), cwagner@kumc.edu, at KU Medical Center.
**Admission**

Persons whose records indicate the ability to succeed with advanced work may be admitted for graduate study to the University of Kansas in one of the professional schools or the College of Liberal Arts and Sciences. Applicants can either apply as degree seeking or nondegree seeking. Applicants applying to an identifiable degree program are degree seeking; applicants who do not have an identified degree program should be admitted under the nondegree-seeking category. No student may work toward a graduate degree without being accepted as a degree-seeking student in a specific graduate program.

### Degree-Seeking Admission

Students who wish to work toward graduate degrees should be considered for admission under the degree-seeking category in either the regular or provisional category.

#### Regular Admission

Requires a bachelor’s degree and a grade-point average of at least a B (3.0 on a 4.0 scale), from KU or from another regionally accredited institution or foreign university with substantially equivalent bachelor’s degree requirements. The bachelor’s degree is not acceptable if it contains credit awarded for work experience (life experience) that was not directly supervised by faculty members of an accredited university or not evaluated in units that identify the academic content (e.g., P/F, S/U). In exceptional cases, persons not holding bachelor’s degrees may be admitted if they are academically well prepared. In these cases, the dean of Graduate Studies reviews the student’s academic background before the student is admitted.

#### Regular Graduate Student, Special B

This category is available only to degree-seeking graduate students in the School of Medicine at KU Medical Center. (1) The student is admitted to graduate study in the School of Medicine. (2) The student meets the academic standards of KUMC Graduate Studies and the basic science departments without excessive deficiencies in prerequisites. (Same as current Regular Admission category.) (3) At any time during the first year after admission, the student may seek entrance directly into a specific graduate discipline in one of the basic science departments. The department reviews the application and makes a recommendation to the dean of Graduate Studies, KU Medical Center. If the application is approved, a completed Progress-to-Degree form changes the student’s status. (4) At the end of the first academic year, which begins with the first semester of enrollment, the student retains graduate status if the department has completed a Progress-to-Degree form or submitted a petition to the dean of Graduate Studies, KUMC. The dean may extend the Special-B status for one semester or an appropriate period of time.

#### Provisional Admission

An applicant who has one or more deficiencies in grade-point average (or English proficiency scores; see Minimum English Proficiency Requirements) or prerequisite course work (or other deficiencies as determined by the department) but meets other admission standards may be admitted on a provisional basis. It is expected that a student who is admitted provisionally for a lack of prerequisite course work or low English proficiency scores will be reviewed within the academic year to see if the requirements for regular admission have been met. A student who meets the requirements will be moved from provisional to regular status when the department submits a Progress-to-Degree form. A student who has not met the requirements for provisional admission at the time of review may be dismissed immediately.

A student admitted provisionally who fails to earn a B average in the first semester may be dismissed immediately. If provisional continuation is recommended by the department or program and approved by the Graduate Division, the student may remain on provisional status for one additional semester. Students who have been dismissed from a graduate program may be readmitted for further graduate study at KU only by petition of a Graduate Division that will accept the student. The petition must be approved by the dean of Graduate Studies.

#### Nondegree-Seeking Admission

Nondegree-seeking applicants must meet the admission standards for regular admission status. A nondegree-seeking applicant does not intend to work for an advanced degree or is working toward a graduate certificate. If a nondegree-seeking student later applies for admission as a regular degree-seeking student and is accepted by a department, the total of transfer credit may not exceed 6 hours, or 8 hours if the student holds a baccalaureate degree from KU (this total includes credit from other accredited graduate schools as well as nondegree credit earned at KU).

Nondegree-seeking applicants who do not meet regular admission standards must be admitted under provisional status.

Applicants who wish to attend institutes or workshops may be admitted through the Easy Admit process. This allows any person with a baccalaureate degree from an accredited institution to take one course a semester, without meeting the additional requirements for regular nondegree-seeking admission.

**Note:** Current degree-seeking graduate students who wish to pursue a graduate certificate are not required to apply for nondegree-seeking status. See Graduate Certificate Programs for more information.

### Admission Procedure

**Apply for admission online** at [www.graduate.ku.edu](http://www.graduate.ku.edu). To ensure adequate time for review, the applicant should check with each individual degree program for its application deadline date.

Applications must be accompanied by one copy of official transcripts from the institution where the applicant earned the bachelor’s degree (or equivalent). This official transcript is used to verify the completion (or intended completion) of a baccalaureate degree (or equivalent). If the applicant has completed any graduate work, official transcripts from the institution(s) must be included as well. Letters of recommendation and test scores also may be required. Applicants should check with the program to which they are applying for more information.

**Please note:** Transcripts and test scores that have been faxed by someone other than a university staff member are not accepted as official copies.

International applicants also must provide English proficiency test scores. The university is unable to issue immigration documents until the international applicant furnishes a financial resources statement. Degree programs may choose to not consider international applications if they are not accompanied by a financial statement. (See Minimum English Proficiency Requirements.)

---

**Complete application materials should be received by July 1 for fall semester, December 1 for spring semester, and May 1 for summer session. Some departments have earlier deadlines.**

**Application fees:** Domestic students in all schools except business: paper $55, online $45. International students in all schools except business: paper $60, online $55. Business students: paper $65, online $60.

For information about KU’s Applied English Center, see the KU Undergraduate Catalog.
Nonrefundable application fees payable to the University of Kansas are required. Rates are subject to change. Some departments and programs require deposits from admitted students, to be fully credited against required fees upon enrollment.

Domestic degree-seeking applicants pay

<table>
<thead>
<tr>
<th>Business</th>
<th>Other Schools and College of Liberal Arts and Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>$65</td>
<td>$55</td>
</tr>
</tbody>
</table>

International degree-seeking applicants pay

<table>
<thead>
<tr>
<th>Business</th>
<th>Other Schools and College of Liberal Arts and Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>$60</td>
<td>$55</td>
</tr>
</tbody>
</table>

Nondegree-seeking applicants, domestic and international, pay

<table>
<thead>
<tr>
<th>Domestic Nondegree Easy Admit applicants pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10</td>
</tr>
</tbody>
</table>

*Please check with your department or the Graduate Application Processing Center to see if you qualify for the Easy Admit category.

On the KU Medical Center campus, send your application for admission, copies of official transcripts, test scores, letters of recommendation, and other required materials directly to the KUMC department in which you wish to study.

Each applicant is notified of the admission decision in writing; this notice clearly explains the admission classification (regular, provisional, nondegree). For all admission categories, enrollment in specific courses may be subject to fulfillment of departmental course prerequisites and consent of the instructor.

Admission to graduate studies does not imply admission to candidacy for a higher degree. A student becomes a candidate for an advanced degree only by demonstrating through resident study at KU the requisite preparation and ability. Requirements for an advanced degree must be regarded as minimum requirements. Additional requirements depend on the student’s undergraduate preparation and the particular field of graduate work chosen.

After an absence of five years from KU, students must apply for readmission to their graduate programs and to the appropriate Graduate Division.

Limitations on Admission

Because of limitations of space, faculty, or general resources for research and instruction, some programs must restrict the number of applicants they admit. Questions should be directed to the program to which the prospective student wishes to apply.

Minimum English Proficiency Requirements for Admission to a Graduate Program

Departments must confirm that all applicants who are not native speakers of English, whether international or U.S. citizens or permanent residents, meet the minimum English proficiency requirements to be admitted to graduate studies with regular or provisional status. Confirmation can come in any one of the following forms:

- Official transcript showing the applicant graduated with a baccalaureate degree (or higher) earned in residence from an accredited U.S. institution of higher education.
- Official transcript showing that the applicant graduated with a baccalaureate degree (or higher) from an institution whose medium of instruction is English. This does not apply to degrees earned online. Verification of English instruction from the university is required as part of the application and must be included in the application package. Verification can be from a catalog or program description brochure or an official letter from a department chair, dean, or other university official stipulating English as the language of instruction. The program considering admission should also conduct a phone interview with the prospective student. Individual programs can opt for a more restrictive policy.
- Receipt of official copy (not student’s copy) of applicant’s proficiency scores achieved not more than two years before the semester of admission.

Note: These guidelines are subject to change by official action of the appropriate governance bodies.

Regular Admission

<table>
<thead>
<tr>
<th>TOEFL (paper)</th>
<th>TOEFL (CBT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All part scores at least 53</td>
<td>All part scores at least 20</td>
</tr>
</tbody>
</table>

Provisional Admission

<table>
<thead>
<tr>
<th>TOEFL (paper)</th>
<th>TOEFL (CBT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All part scores 51-52</td>
<td>All part scores 18-19</td>
</tr>
</tbody>
</table>

Deny Admission

<table>
<thead>
<tr>
<th>TOEFL (paper)</th>
<th>TOEFL (CBT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or more part scores below 51</td>
<td>One or more part scores below 18</td>
</tr>
</tbody>
</table>

TOEFL (iBT)

<table>
<thead>
<tr>
<th>Provisional Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deny Admission</td>
</tr>
<tr>
<td>TOEFL (iBT)</td>
</tr>
<tr>
<td>Reading, Listening, and Writing part scores below 20*</td>
</tr>
</tbody>
</table>

IELTS

<table>
<thead>
<tr>
<th>Provisional Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deny Admission</td>
</tr>
<tr>
<td>IELTS</td>
</tr>
<tr>
<td>Minimum overall score 6.0 with no part score below 5.5</td>
</tr>
</tbody>
</table>

*See Additional Spoken English Proficiency Requirements for Graduate Teaching Assistants.

Any non-native English-speaking student who is sponsored may be admitted provisionally without submitting language proficiency scores. In this case, the sponsored student must provide official English proficiency test results (not more than two years old) to the department or must pass a proficiency examination administered by the Applied English Center upon arrival at KU. After the sponsored student’s English proficiency has been verified to meet requirements, the status of the sponsored international graduate student may be changed from provisional to regular.

*Additional Spoken English Proficiency Requirements for Graduate Teaching Assistants.

The Kansas Board of Regents requires a spoken language proficiency assessment for employment positions requiring classroom or laboratory instructional responsibility and/or direct tutorial responsibilities. Therefore, GTAs must achieve a minimum TSE or SPEAK score of 50, iBT speaking score of 24; or IELTS score of 8. If this is not achieved,

- The student must provide a personal financial document as required by the U.S. government to issue the DS-2019 or I-20,
- The department may retract the GTA offer,
- The department may still honor the GTA offer, but the student must take the SPEAK test offered by the Applied English Center and achieve a score of at least 50.

Applied English Center. The Applied English Center certifies the English proficiency of non-native speakers of English admitted to the University of Kansas for graduate study. All non-native speakers of English must check in with the AEC upon arrival for verification of English language proficiency. Please note: Students will have an AEC hold on their student accounts until this check-in is completed and will be unable to enroll in courses until the hold is removed.

Admission to a graduate program does not guarantee that a non-native speaker of English will be able to begin course work immediately. A student will be required to enroll in one or more English language courses at the AEC when evaluation at the AEC determines it necessary. It is also required if

- Any part of the Internet-based TOEFL is below 23,
- Any part of the computer-based TOEFL is below 23 or an essay score is below 5,
- Any part of the paper-based TOEFL is below 57 or an essay score is below 5,
- An IELTS overall score is below 6.5 or any score is below 6.0.

To receive a waiver from the Applied English Center, higher proficiency test results are required than those described here for admission; contact the AEC for more information.

For KU Medical Center minimum English proficiency requirements, see www2.kumc.edu/aa/gradstudies/grad_adm.htm.
Degrees

Degrees are awarded three times each year, in August, December, and May. Each academic year’s degrees are conferred formally at the annual commencement in May. Degree candidates are not eligible to graduate if the graduate grade-point average is lower than 3.0 in all courses acceptable for graduate credit. Only doctoral candidates who have fulfilled all degree requirements by the deadline date for graduation in May are allowed to participate in the May doctoral hooding ceremony.

Students who are working toward two degrees must complete requirements for each degree. Course work may not count toward fulfilling degree requirements for more than one degree.

Graduate students may not earn an additional KU degree with the same name and degree code as a previously awarded degree from KU. This applies to the completion of different degree tracks, concentrations, and subspecialties within a given degree. This does not prohibit students from earning additional master’s or doctoral degrees in another discipline.

Master's Degrees

Traditional Master of Arts and Master of Science degrees are granted, as well as a number of professional master’s degrees that have developed out of the arts and science degrees.

Master of Arts and Master of Science. Historically, most of the master’s degrees granted have been the Master of Arts and Master of Science. This fact conforms with the traditional liberal arts background out of which most U.S. graduate schools developed. These degrees’ requirements are generally concentrated in one area or major discipline.

Master of Arts and Master of Science with a Major in Special Studies. For students whose academic and professional goals can best be achieved by interdisciplinary study at the master’s level, KU offers the M.A. and M.S. degree programs in special studies. See M.A. and M.S. with a Major in Special Studies under Master’s Degree Requirements in this chapter. Specific information on eligibility for admission may be obtained from the Graduate Division offices.

Professional Master’s Degrees. A number of professional master’s degrees are granted, most of which are offered through the professional schools. Exceptions are noted by an asterisk (*). Consult the chapter pertaining to the appropriate college or school for detailed descriptions of all professional master’s programs.

Master's Degree Programs

School of Allied Health
Master of Arts
Audiology
Speech-Language Pathology
Master of Occupational Therapy
Master of Science
Dietetics and Nutrition
Molecular Biotechnology
Nurse Anesthesia
Occupational Therapy

School of Architecture, Design and Planning
Master of Architecture
Master of Arts
Architecture
Design
Master of Fine Arts
Design
Master of Science
Architectural Engineering (with School of Engineering)
Master of Urban Planning

School of Business
Master of Accounting
Master of Business Administration
Master of Science
Business

School of Education
Master of Arts
Education

Master of Science
Counseling Psychology
Master of Science in Education

School of Engineering
Master of Civil Engineering
Master of Construction Management
Master of Engineering—Aerospace Engineering
Master of Science
Aerospace Engineering
Architectural Engineering (with School of Architecture, Design and Planning)
Bioengineering
Chemical Engineering
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Engineering Management
Environmental Engineering
Environmental Science
Information Technology
Mechanical Engineering
Petroleum Engineering
Water Resources Science

School of Journalism and Mass Communications
Master of Science
Journalism

College of Liberal Arts and Sciences
Master of Arts
African and African-American Studies
American Studies
Anthropology
Applied Behavioral Science
Audiology
Biochemistry and Biophysics
Botany
Chemistry
Child Language
Classics
Clinical Child Psychology
Communication Studies
East Asian Languages and Cultures
Ecology and Evolutionary Biology
Economics
English
Entomology
French
Geography
Germanic Languages and Literatures
Gerontology
Global Indigenous Nations Studies
History
History of Art
International Studies
Latin American Studies
Linguistics
Mathematics
Microbiology
Molecular, Cellular, and Developmental Biology
Museum Studies
Philosophy
Political Science
Psychology
Religious Studies
Russian and East European Studies
Slavic Languages and Literatures
Sociology
Spanish
Speech-Language Pathology
Master of Fine Arts*
Creative Writing
*Professional degree administered by the Department of English
Master of Public Administration*
*Professional degree administered by the Department of Public Administration

Master of Science
Atmospheric Science
Chemistry
Geology
Physics

School of the Arts
Master of Arts
Film and Media Studies
Theatre
Visual Art Education

Master of Fine Arts
Design
Theatre Design
Visual Art
School of Medicine
Master of Arts
  Cell Biology and Anatomy
  Microbiology
  Pathology
  Pharmacology
Master of Health Services Administration
Master of Public Health
Master of Science
  Biochemistry and Molecular Biology
  Clinical Research
  Molecular and Integrative Physiology
  Pharmacology
  Toxicology
School of Music
Master of Music
  Music
School of Nursing
Master of Science
  Nursing
School of Pharmacy
Master of Science
  Hospital Pharmacy
  Medicinal Chemistry
  Pharmaceutical Chemistry
  Pharmacology and Toxicology
School of Social Welfare
Master of Social Work
  The college and the schools listed above may offer either or both of the degrees Master of Arts and Master of Science with a major in special studies.

Combined Degrees. Several combined degrees are granted in programs meeting the requirements of the graduate master’s or doctoral degree and the professional post-baccalaureate degree. Approved programs include those for the degrees of
  M.A. or M.S. in basic medical science fields with the M.D.
  M.A. with a major in American Studies with M.U.P.
  M.A. with a major in Geography with M.U.P.
  M.A. with a major in East Asian Languages and Cultures, Economics, Global Indigenous Nations Studies, Philosophy, or Political Science with J.D.
  M.B.A., M.H.S.A., M.P.A., M.S. in Journalism, M.S.W., or M.U.P. with J.D.
  M.B.A. with Master’s in Management from ESC Clermont, France
  M.B.A. with M.A. in area studies (East Asian Languages and Cultures; Latin American Studies; or Russian, East European, and Eurasian Studies)
  M.B.A. with M.Arch.
  M.B.A. with Pharm.D.
  M.H.S.A. with B.S. in Health Information Management
  M.P.A. with M.U.P.
  M.D. with M.P.H.
  M.D. with M.H.S.A.
  M.D. with Ph.D. in Bioengineering
  M.P.H. with Ph.D. in Behavioral Psychology, offered through the Department of Applied Behavioral Science
  M.S. in Nursing with M.H.S.A. or M.P.H.
  Au.D. with Ph.D.

Specialist in Education
The degree of Specialist in Education is offered through the School of Education and may be earned as a concentration on the basis of two years of graduate work (which can include an appropriate master’s degree or equivalent). Information on this degree, including the concentration in which it may be earned, can be found in the School of Education chapter.

For detailed requirements for a specific degree, consult the individual program listings.

Two KU graduate programs — special education and city management and urban policy — rank first in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
science, and clinical procedures. Consistent with ASHA certification standards, degree requirements also include the completion of a minimum of 2,000 hours of supervised clinical practicum. Au.D. students also must complete a research project and present the findings at a faculty-student forum. Degree requirements are listed under Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog.

Doctor of Education. The degree of Doctor of Education (Ed.D.) is a professional degree designed primarily for practitioners in the field of education. Applicants must present evidence of successful experience in professional education. While many of the requirements for the degree closely parallel those for the Ph.D., the degree program—particularly the dissertation—focuses on research concerned with application of existing knowledge rather than on basic research. Specific degree requirements are listed in the School of Education chapter of this catalog.

Doctor of Engineering. The degree of Doctor of Engineering (D.E.) is directed toward the practice of engineering and includes the entire process of technology from planning to product. Candidates for the degree are intimately associated throughout their tenure with technology project teams, generally composed of master’s degree candidates and undergraduates.

Doctor of Musical Arts. The degree of Doctor of Musical Arts (D.M.A.) is intended as recognition of high professional attainment. Since only exceptionally well-qualified candidates are admitted to the program, students are expected to devote their doctoral studies primarily to developing professional qualifications for teaching at the college level. The degree of Doctor of Musical Arts is offered in the specific fields of bassoon; church music (organ or choral conducting emphasis); clarinet; composition; conducting (band, choral, or orchestral); flute; French horn; oboe; organ; percussion; piano performance, literature, and pedagogy; saxophone; strings; trombone; trumpet; tuba; and voice.

Doctor of Nursing Practice. The Doctor of Nursing Practice (D.N.P.) at the KU School of Nursing prepares advanced practice nurses at the highest level of nursing practice. Advanced practice nurses provide patient-centered care that is evidence-based, contribute to the development of evidence-based practice, and pursue leadership roles in a variety of health care and educational settings. Requirements are listed in the School of Nursing chapter of this catalog.

Doctor of Occupational Therapy. The Doctor of Occupational Therapy (O.T.D.) is a professional degree offered by the School of Allied Health. Requirements for admission are listed in the School of Allied Health chapter of this catalog.

Doctor of Physical Therapy. The Doctor of Physical Therapy (D.P.T.) is a professional degree designed primarily for individuals entering physical therapy. Graduates with the D.P.T. may apply for state licensure or registration to practice physical therapy. To be eligible for admission, the student must have a minimum of a baccalaureate degree or its equivalent and have completed all prerequisites. Requirements for admission are listed in the School of Allied Health chapter of this catalog.

**Doctoral Degree Programs**

**School of Allied Health**
- Doctor of Audiology
- Doctor of Occupational Therapy
- Doctor of Philosophy
  - Audiology
  - Rehabilitation Science
  - Speech-Language Pathology
  - Therapeutic Science
- Doctor of Physical Therapy

**School of Architecture, Design and Planning**
- Doctor of Philosophy
  - Architecture

**School of Business**
- Doctor of Philosophy
  - Business

**School of Education**
- Doctor of Education
- Doctor of Philosophy
  - Education
  - Counseling Psychology

**School of Engineering**
- Doctor of Engineering
  - Aerospace Engineering
  - Civil Engineering
  - Electrical Engineering
  - Mechanical Engineering
- Doctor of Philosophy
  - Aerospace Engineering
  - Bioengineering
  - Chemical and Petroleum Engineering
  - Civil Engineering
  - Computer Science
  - Electrical Engineering
  - Environmental Engineering
  - Environmental Science
  - Mechanical Engineering

**College of Liberal Arts and Sciences**
- Doctor of Philosophy
  - American Studies
  - Anthropology
  - Audiology
  - Behavioral Psychology
  - Biochemistry and Biophysics
  - Bioinformatics
  - Botany
  - Chemistry
  - Child Language
  - Clinical Child Psychology
  - Communication Studies
  - Ecology and Evolutionary Biology
  - Economics
  - English
  - Entomology
  - French
  - Geography
  - Geology
  - Germanic Languages and Literatures
  - Gerontology
  - History
  - History of Art
  - Linguistics
  - Mathematics
  - Microbiology
  - Molecular, Cellular, and Developmental Biology
  - Philosophy
  - Physics
  - Political Science
  - Psychology
  - Public Administration
  - Slavic Languages and Literatures
  - Sociology
  - Spanish
  - Speech-Language Pathology

**School of the Arts**
- Doctor of Philosophy
  - Film and Media Studies
  - Theatre

**School of Medicine**
- Doctor of Philosophy
  - Biochemistry and Molecular Biology
  - Cell Biology and Anatomy
  - Health Policy and Management
  - Microbiology
  - Molecular and Integrative Physiology
  - Pathology
  - Pharmacology
  - Toxicology

**School of Music**
- Doctor of Musical Arts
- Doctor of Philosophy
  - Music
  - Music Education

**School of Nursing**
- Doctor of Nursing Practice
- Doctor of Philosophy
  - Nursing
School of Social Welfare
Doctor of Philosophy
Social Work

The University of Kansas School of Medicine offers the Doctor of Medicine degree. See www.catalogs.ku.edu/medicine or www.kumc.edu/son for further information.

The University of Kansas School of Law offers the Juris Doctor degree. See the School of Law Catalog or www.law.ku.edu for further information.

Graduate Certificate Programs

Eligibility and Admission Criteria
A student admitted for a graduate certificate program must either have regular graduate status as a current KU student or be admitted as a nondegree-seeking graduate student. Degree-seeking graduate students admitted to a certificate program must be in good standing (3.0 or higher grade-point average) with their department. A degree-seeking student currently enrolled in a graduate degree program who wishes to pursue a simultaneous graduate certificate in another department must inform the graduate director/adviser/coordinator in the home department of his or her intent to seek the certificate. A degree-seeking KU graduate student must make known her or his intent to receive the certificate before completing the certificate program requirements. Graduate certificates are not granted retroactively.

Graduate credit from another institution may not be transferred to a KU graduate certificate program.

The graduate certificate program is not a means of entry into a graduate degree program. If students admitted to the nondegree certificate category are later admitted to a department to work toward a graduate degree, applicable courses taken for the graduate certificate program in the nondegree category may, upon recommendation of the department or program to its Graduate Division and within general guidelines, be approved by the division to be counted toward the degree.

In meeting degree requirements, the total graduate hours earned as a KU nondegree graduate certificate student and graduate hours transferred from another accredited graduate school may not exceed 6 hours (8 hours if the student holds a baccalaureate degree from KU).

A graduate certificate program must adhere to the same standards for degree-seeking admission (grade-point average, English proficiency) and similar criteria in accordance with policies, regardless of whether certificate courses may be counted toward the related graduate degree program.

Approved Graduate Certificate Programs
An updated list of graduate certificate programs offered at KU may be found at www.graduate.ku.edu.

African Studies, offered by the Department of African and African-American Studies through the Kansas African Studies Center
Brazilian Studies, offered by the Latin American Area Studies Program

Most health sciences programs of the University of Kansas are offered at the KU Medical Center in Kansas City.

The Fiske Guide to Colleges, which rates “the best and most interesting” U.S. colleges and universities, gives KU four out of five stars in academics, quality of life, and social life.
Master's Degree Requirements | Doctoral Degree Requirements

centrated in the major area, with only a minimal amount of work (usually no more than 6 hours) that is completed at KU permitted outside the major department. Each master’s program must contain a research component, represented either by a thesis (usually for 6 hours of credit) or by an equivalent enrollment in research, independent investigation, or seminars. Within these requirements and well-founded practices, departmental master’s programs may be flexible enough to meet the particular needs of individual students.

In a few cases, the degree is offered through two schools and administered by joint committees from the two faculties. The Master of Arts degree in speech-language pathology and the Master of Arts degree in audiology are administered by an intercampus committee drawn from the Department of Speech-Language-Hearing; Sciences and Disorders in Lawrence and from the Department of Hearing and Speech of the School of Allied Health in Kansas City.

A final general examination or defense of the thesis or culminating master’s project in the major subject is required of all candidates for the Master of Arts or Master of Science. The degree program and the Graduate Division should ascertain that the graduate student is in good academic standing (3.0 or higher grade-point average) before scheduling the final general examination or thesis defense. At the option of the department, the examination may be oral or written, or partly oral and partly written. In some departments, passing a written examination is a necessary preliminary to taking the oral examination by which success or failure is judged. Master’s examinations are administered by a committee of at least three members of the Graduate Faculty. The examination is held during the semester of the student’s final enrollment in course work. The thesis defense should be held when the thesis has been substantially completed. The department’s request to schedule the general examination must be made on or before the date set by the Graduate Division, normally a minimum of two weeks before the examination date. Students earning a master’s thesis degree must have completed at least 1 hour of thesis enrollment before the master’s degree may be awarded. See www.graduate.ku.edu for information and requirements for submitting the thesis electronically.

All graduate students enrolled in master’s graduate programs must be enrolled the semester they complete master’s degree requirements. Master’s students who complete degree requirements during the first week of summer session or within the first two weeks of the fall or spring semester are not required to be enrolled for that term unless they were not enrolled during the previous semester.

M.A. and M.S. with a Major in Special Studies

Only superior students admitted and enrolled in a graduate program at KU whose proposed studies require direction not available in any single department are considered for admission to a special studies program. Before seeking acceptance, an applicant must assemble a graduate faculty advisory committee headed by a faculty member authorized to direct doctoral research and dissertations and prepare, in conjunction with the committee, a proposal for the course of study. The proposal must provide a rationale for the particular mix of disciplines, demonstrating how each contributes to a central theme or focus. It must also show that the proposed program cannot be achieved through an established master’s program.

The proposal is submitted for approval to the Graduate Division of the school or college housing the proposed program. If the proposed program involves substantial contributions from more than one school or college, it must be submitted for approval to the Graduate Division of each. If the proposal is accepted, the student may pursue the program, subject only to the degree requirements specified therein and the general requirements. Specific information may be obtained from Graduate Division offices.

Combined Medical and Master's Degrees

Graduate students in the basic medical science departments in the School of Medicine are enrolled, for the most part, only in graduate programs. Outstanding medical students, however, are allowed to participate in work leading jointly to the M.D. degree and a graduate degree. A student admitted to both schools may enroll concurrently in courses in the respective schools, provided the regular medical course load is reduced to compensate for the added graduate work. The student should discuss concurrent enrollment with the chair or graduate adviser of the basic science department; departmental policies vary. All requirements for the degrees must be met, but within these limitations, superior students may be able to complete the joint degree program in less than the total required for the two degrees to be earned separately. For the master’s degree, a student must complete graduate work equivalent to at least one academic year in addition to the time spent on the medical curriculum. A structured joint degree program between the M.D. and Master of Public Health is offered.

Doctoral Degree Requirements

The sections immediately following list the general and common requirements for doctoral degrees. Specific degree requirements, including requirements for the professional doctoral degrees, set by specific departments, programs, and schools, appear in the sections of the catalog devoted to those units.

Doctor of Philosophy

This section lists KU regulations common to the administration of all doctoral programs. The particular application, interpretation, or method of implementation of such a common element for individual degree programs and departments is, in certain cases, left to the faculty of the department or the degree program (e.g., Research Skills). Additional requirements specific to each degree, along with variations permitting each student to achieve particular academic goals, are listed in the chapter of this catalog for the school through which the degree program is offered.

When a department or program requests its Graduate Division to schedule a comprehensive oral examination or a final oral examination for a student, it must report on the student’s completion of both the general requirements and the specific requirements of the degree program, department, and school. The degree program and Graduate Division should ascertain that the graduate student is in good academic standing (3.0 or higher grade-point average) before scheduling a comprehensive oral examination or a final oral examination.

Doctoral students completing all their degree requirements within the first week of summer session or within the first two weeks of the fall or spring semester are not required to be enrolled for that term.

1. Application and Admission. A student who seeks admission to a doctoral program must apply to the graduate degree program and school offering the desired degree. Upon admission, the student is known as an aspirant for the degree and remains so designated until successful completion of the comprehensive oral examination. After passing that examination, the student is designated a candidate for the degree.

2. Program Time Constraints. Minimum Tenure: The student must spend three full academic years, or the bona fide equivalent thereof, in resident study at this or some other approved university, including the time spent in attaining the master’s degree. Resident study at less than full time requires a correspondingly longer period, but the requirement is not measured merely in hours of enrollment. Because a minimum number of hours for the degree is not prescribed, no transfer of credit is appropriate. However, graduate degree programs take relevant prior gradu-
Residence Requirement: Two semesters, which may include one summer session, must be spent in resident study at KU. During this period, the student must be involved full time in academic or professional pursuits, which may include an appointment for teaching or research if it is directed specifically toward degree objectives. Enrollment in approved distance-learning courses offered through KU cannot be used to meet the doctoral residence requirement. The student must be enrolled in a minimum of 6 credit hours a semester, and the increased research involvement must be fully supported and documented by the dissertation supervisor as contributing to the student’s dissertation or program objectives. Research must be performed under the direct supervision of the major adviser if on campus, or with adequate liaison if off campus.

Note: These are minimum residence requirements. Please check with the Graduate Division of your school or college for any additional requirements.

Maximum Tenure: After being admitted to doctoral programs at KU, students complete all degree requirements in eight years. In cases in which compelling circumstances recommend a one-year extension, the Graduate Division has authority to grant the extension on the written advice of the department and dissertation committee. Students who complete the master’s degree at KU and subsequently begin doctoral studies have a maximum total enrolled time of 10 years to complete both degrees. Normal expectations, however, are that most master’s degrees (excluding some professional terminal degrees) should be completed in two years of full-time study, and both master’s and doctorate in six years of full-time study. Some graduate degree programs may have more stringent time restrictions. Students should inquire about the policy in effect in the department in which they plan to study.

A student in any of the above categories may petition the Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily a leave of absence is granted for one year, with the possibility of extension upon request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate Division.

3. Research Skills. Specific research skills requirements vary with graduate degree programs, but all reflect the expectation of a significant research skill component distinct from, but strongly supportive of, the dissertation. Traditionally, a reading knowledge of two foreign (non-English) languages, a demonstrated competence in reading, writing, and speaking in one foreign language, or a reading knowledge of one foreign language and demonstrated proficiency in some other research skill, such as computer science, has been required. However, to fit research training to the needs of the individual student, some programs have found it appropriate to regard as research skills formal training in ancillary areas or within a broad spectrum of skills. A statement concerning research skills should appear in each departmental or program section of this catalog and in any graduate study guides issued by departments, programs, or schools.

When the aspirant has met the requirements for research skills recommended by the program and approved by the school, the program must report this fact to the Graduate Division on the appropriate form, certifying that the student is prepared to proceed to the comprehensive oral examination. If a program requires research skills that are tested separately from the program, completion of each requirement should be reported immediately to the Graduate Division so that it may be recorded on the student’s permanent record.

Because foreign language and computer science competences are the most commonly used research skills requirements, the formal procedures that have been established for demonstration of these competences are listed here for guidance.

Foreign Language: An aspirant who wishes to demonstrate a reading knowledge of a foreign language ordinarily may do so in one of two ways: (1) pass a language examination devised and administered by the student’s own department in consultation with the appropriate KU language department or (2) complete DANE 101, DITCH 101, FREN 100, GERM 101, ITAL 100, RÜSS 101, or SPAN 100 with a grade of C or higher, or LAT 101 with a grade of B or higher. If some other language is proposed, arrangements should be made through the major or departmental adviser with the appropriate language department or competent testing authority. Some graduate degree programs accept as evidence of language competence the certification of a graduate student by a qualified KU professor in a given language at the fourth level of competence in reading, comprehension, and speaking or accept 16 hours in a single language taken at this or another university as a graduate or undergraduate student. Requirements for demonstrating competence in reading, writing, and speaking one foreign language are set by the language departments. The student should ask these departments for further information and advice. In all cases, the Graduate Division should be notified which method each student has used to satisfy this requirement.

A student whose native language is not English may use the native language to fulfill the language requirement only if the language is considered an adequate research tool for the program.

Computer Science: To establish competence in computer science, a student must (a) demonstrate proficiency in a commonly used programming language and (b) create at least one original program on a problem that is certified by the graduate degree program as important and relevant to the field of study.

As specified by the graduate degree program, requirement (a) may be met by passing an examination developed and administered by the Department of Electrical Engineering and Computer Science or by satisfactorily completing an appropriate course in computer science. In consultation with the department, the Department of Electrical Engineering and Computer Science provides certification of requirement (b).

4. Comprehensive Oral Examination. When a doctoral aspirant has completed the major portion of the course work at a level satisfactory to the graduate degree program and school and met all other program, school, and general requirements prerequisite to the comprehensive oral examination, including the research
skills requirement as appropriately applied and established for the student’s particular program, the degree program must request the Graduate Division of its school to schedule the comprehensive oral examination. It should be determined that the student is in good academic standing (3.0 or higher grade-point average) before scheduling the examination. The examination request must be submitted in advance of the examination date by at least the period specified by the Graduate Division, normally a minimum of two weeks. The Graduate Division ascertains whether all pertinent requirements have been satisfied and if reports of any previously scheduled comprehensive oral examinations have been properly submitted and recorded.

The committee for the comprehensive oral examination must consist of at least five members, all of whom must be members of the Graduate Faculty. Its members are appointed by the Graduate Division of the school or college on the basis of nominations submitted by the graduate degree program. At least one member must be from a department other than the aspirant’s major department. This member represents Graduate Studies and must be a regular member of the Graduate Faculty. The Graduate Studies representative is a voting member of the committee, has full right to participate in the examination, and reports any unsatisfactory or irregular aspects of the examination to the committee chair, department chair, Graduate Division, and Graduate Studies. The examination may be scheduled provided that at least five months have elapsed from the time of the aspirant’s first enrollment at KU.

The comprehensive oral examination covers the major field and any extradepartmental work for which the program wishes to hold the aspirant responsible. For every scheduled examination, the degree program reports a grade of Honors, Satisfactory, or Unsatisfactory. If the aspirant receives a grade of Unsatisfactory on the comprehensive oral examination, it may be repeated on the recommendation of the degree program, but under no circumstances may it be taken more than three times. In any case, the examination may not be repeated until at least 90 days have elapsed since the last unsuccessful attempt.

5. Candidacy. Dissertation Committee: Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the doctorate. If it has not begun before, the traditional, close student-mentor apprenticeship relationship comes into being. The student is expected to learn by both precept and example of the mentor, and often in collaboration. The chosen field of scholarship is explored using acquired research tools. The principles and customs of academic inquiry and the codes of ethics traditional to the various disciplines and professional fields become part of the student’s thinking and working.

When the student passes the comprehensive oral examination, the Graduate Division of the appropriate school designates the candidate’s dissertation committee based on the recommendations of the candidate’s major department. The dissertation committee must consist of at least three members and may include members from other departments and divisions or, on occasion, members from outside the university. All members of the committee must be chosen from the Graduate Faculty, and the chair must, in addition, be authorized to chair doctoral dissertations. A prospective member of the committee from outside the university must have gained appointment as an Ad Hoc member of the Graduate Faculty before appointment to the committee.

Post-Comprehensive Enrollment: After passing the comprehensive oral examination for a doctoral degree, the candidate must be continuously enrolled, including summer sessions, until all requirements for the degree are completed, and each enrollment request must reflect as accurately as possible the candidate’s demands on faculty time and university facilities. During this time, until all requirements for the degree are completed (including the filing of the dissertation) or until 18 post-comprehensive hours have been completed (whichever comes first), the candidate must enroll for a minimum of 6 hours a semester and 3 hours a summer session.

Post-comprehensive enrollment may include enrollment during the semester or summer session in which the comprehensive oral examination has been passed. If after 18 hours of post-comprehensive enrollment the degree is not completed, the candidate must continue to enroll each semester and each summer session until all degree requirements have been met. The number of hours of each enrollment must be determined by the candidate’s adviser and must reflect as accurately as possible the candidate’s demands on faculty time and university facilities.

6. Dissertation. The candidate must present a dissertation showing the planning, conduct, and results of original research and scholarly creativity. The purpose of the dissertation is to encourage and ensure the development of broad intellectual capabilities as well as to demonstrate an intensive focus on a problem or research area. The dissertation itself should be an evident product of the candidate’s growth and attainment of the ability to identify significant problems; organize, analyze, and communicate scholarly results; and bring to bear on a useful area of interest a variety of research skills and scholarly or creative processes. It must show some original accomplishment, but it should also demonstrate without doubt the candidate’s potential to make future contributions to knowledge and understanding.

The dissertation is to be a coherent scholarly work, not a collage of separate, distinct pieces. Its unity of theme and treatment may still accommodate several subtopics by demonstrating their relationships and interactions. If previously published material by other authors is included in the dissertation, it must be quoted and documented. It should be noted that prior publication does not guarantee acceptance of the dissertation by the dissertation committee. Final acceptance of the dissertation is subject to the approval of the dissertation committee. The dissertation—or one or more substantial portions of it, often rewritten—is expected to be publishable and indeed to be published (see Dissertation Submission and Publication section).

Both the dissertation research and the dissertation itself are to be completed under the guidance and direction of the committee appointed as described above. Instructions about the proper form of the dissertation may be obtained at www.graduate.ku.edu or from the Graduate Division of each program. Candidates and faculty members are reminded that the dissertation is to be a coherent, logically organized scholarly document. Because the demands and practices of different disciplines are varied, the format is somewhat flexibly described, and moderate

---

Course offerings for each semester are listed in the online Schedule of Classes at www.registrar.ku.edu.

The first chapters of Phi Beta Kappa and Sigma Xi west of the Mississippi were chartered at KU.
departures from the norm are allowed when justified by the nature of the work or the circumstances of presentation. Any substantial divergences must be approved in advance as prescribed by the instructions, and candidates and faculty members are urged to seek early approval to avoid last-minute disappointments over unacceptable format or reproduction.

7. Final Oral Examination. Completion of the dissertation is the culminating academic phase of a doctoral program, climaxed by the final oral examination and defense of the dissertation. In all but the rarest cases, tentative approval of the dissertation is followed promptly by the final oral examination. When the completed dissertation has been accepted by the committee in final draft form, and all other degree requirements have been satisfied, the chair of the committee requests the Graduate Division to schedule the final oral examination. This request must be made in advance of the desired examination by at least the period specified by the Graduate Division (normally at least three weeks). The submission of the request must allow sufficient time to publicize the examination so that interested members of the university community may attend. At least five months must elapse between the successful completion of the comprehensive oral examination and the date of the final oral examination.

The committee for the final oral examination must consist of at least five members (the members of the dissertation committee plus other members of the Graduate Faculty recommended by the committee chair and the department and appointed by the Graduate Division). At least one member must be from a department other than the major department. This member represents Graduate Studies and must be a regular member of the Graduate Faculty. Before the examination, the Graduate Division provides a list of responsibilities to the Graduate Studies representative. The Graduate Studies representative is a voting member of the committee, has full right to participate in the examination, and provides a written report on any unsatisfactory or irregular aspects of the examination to the committee chair, department chair, Graduate Division, and Graduate Studies. The Graduate Division ascertains whether all other degree requirements have been met and if reports of any previously scheduled final oral examinations have been submitted and recorded. Upon approval of the request, the final oral examination is scheduled at the time and place designated by the Graduate Division. This information must be published in a news medium as prescribed by the Graduate Faculty. Interested members of the university community are encouraged to attend these examinations.

For every scheduled final oral examination, the department reports to the Graduate Division a grade of Honors, Satisfactory, or Unsatisfactory for the candidate’s performance. If an Unsatisfactory grade is reported, the candidate may be allowed to repeat the examination on the recommendation of the department.

8. Dissertation Submission and Publication. When the final oral examination has been passed and the dissertation has been signed by the members of the dissertation committee, a title page and acceptance page with original signatures are to be delivered to the Graduate Division so that completion of degree requirements may be officially certified. In addition, the candidate must arrange publication of the dissertation and payment of all associated fees (including copyright fee if applicable), through the electronic submission process found at www.graduate.ku.edu.

The student must be the author of the dissertation, and every publication from it naturally must indicate that authorship. However, practices vary among disciplines, and even among scholars in a given field, as to whether the mentor’s name may appear as a co-author and whether as senior or junior, on the published dissertation, usually revised, or on articles prepared from it. Clear understandings in individual cases are expected to derive from the apprenticeship period, when the publication of ethical practices in the student best results from their regular application by the mentor.

Ph.D. with a Major in Special Studies

The student seeking to enter the special studies program must have an outstanding academic record (a grade-point average of 3.75 or higher on a 4.0 scale for graduate courses or a grade-point average of 3.5 or higher on a 4.0 scale for undergraduate courses if no graduate courses have been taken) and must be admitted to and enrolled in a graduate program at KU at the time of application. A graduate student who has failed to maintain the required grade-point average is not eligible for the special studies program. A student is not eligible for this program if he or she has tried and failed to achieve candidacy in a regular graduate department or program at KU.

The student is expected to assume the initiative in determining his or her potential eligibility through consultation with graduate advisers and, if deemed eligible, in forming an advisory committee and preparing documentation to support the application.

Preadmission Procedures. To enter the program, a student should

1. Determine that KU offers courses and research in the areas appropriate to the student’s interest.
2. Prepare a tentative study plan based on those offerings to serve as a basis for initial discussion.
3. Approach a professor whose interests are comparable to those of the student and request that he or she act as adviser. Normally this professor is a faculty member of the program of principal interest to the student. It is essential that this program be one that grants doctorates and that the selected professor be authorized to chair doctoral dissertation committees.
4. After a professor agrees to serve as adviser, the student should assemble an advisory committee of at least three additional professors representing the disciplines covered in the special program. At least two disciplines or departments must be represented.
5. In conjunction with the adviser and the committee, the student prepares a proposal for study, including

(a) A statement, with supporting documentation, that the proposed special studies Ph.D. cannot be accomplished through established programs.
(b) A definition of the field of study incorporating in a consistent way a description of the contribution of each included discipline to the broader field.
(c) An outline of the course of study, indicating substantive work in the fields represented. Readings courses and independent study do not substitute for regular courses.
(d) A description of the method for satisfying research skills requirements.
(e) A description of the comprehensive examination procedures (nature of the examinations and possible examining committees).
(f) A description, to the extent possible, of the nature of the field in which a dissertation might be written, indicating the respective contributions of the selected disciplines to the final product.
(g) Attach the following: (i) complete transcripts of all previous work, (ii) a cover sheet, signed by committee members, indicating their support of the proposal, (iii) letters of recommendation and other appropriate supporting documents.

Note: Diplomas and transcripts indicate the degree awarded as “Ph.D. in Special Studies” and do not specify the area of specialization.

Admission and Review Procedure. Upon completion of the above, the student must present the application for admission to the special studies program. At that time, a review committee is appointed, consisting of (a) dean(s) or director(s) of graduate studies or their designates for the school(s) involved in the interdisciplinary undertaking and (b) two or more doctoral chairing faculty members from unrelated fields who are members of the Executive Council of the Graduate Faculty, at least one of whom must represent a discipline not involved in the special studies program under consideration. The committee reviews the documents and may, if necessary, interview the student and the adviser for clarification and additional information or to discuss suggested revisions to the proposal.
Approved Program Implementation. Upon acceptance of the proposal and admission to the special program, the student is admitted to the school of the major adviser to facilitate record keeping and to provide a central administrative office. The director of graduate studies of that school must enroll the student and monitor the program and, along with the major adviser, must make periodic reports to Graduate Studies on the student’s progress. These reports are distributed to the directors of other involved programs along with a request to supply any additional information regarding the student’s performance. Proposals for major deviations from the approved course of study must be submitted for review by Graduate Studies and by the graduate studies office(s) of the involved school(s). It is understood that no additional requirements unique to traditional graduate programs of the involved school(s) or departments may be imposed unless stated explicitly in the approved study plan.

All basic rules and requirements for the Doctor of Philosophy degree apply to special studies doctoral programs. These include program time constraints, residence requirement, post-comprehensive enrollment, final oral examination, dissertation submission and publication, grade-point average, etc. (See Doctoral Degree Requirements, Doctor of Philosophy, in this chapter of the catalog.)

Combined Medical and Doctoral Degrees

Outstanding students who are qualified to do so may participate concurrently in work leading to the medical degree and the Ph.D.

Credit hours obtained in the medical curriculum cannot be transferred as graduate credit hours toward the requirements for the Ph.D. degree, although recognition of satisfactory performance in appropriate medical courses may be given by the involved basic medical science department when formulating the student’s additional graduate curriculum for the Ph.D. All the requirements for the respective degrees must be met.

Posthumous Degrees

For a degree to be granted posthumously, a request must be initiated by the student’s academic department, approved by the school or college, and submitted in writing to the Executive Council of the Graduate Faculty. Each case is determined on its own merits.

Special Sessions and Programs

Extramural (Off-Campus) Graduate Study

With the approval of the Executive Council of the Graduate Faculty, off-campus centers may be established to permit students to work for graduate residence credit (credit that counts toward a graduate degree). Extramural centers must meet established criteria for faculty, students, programs, resources (library and laboratory, etc.), and administration. Centers for extramural programs have been approved in the U.S. Army Command and General Staff College at Fort Leavenworth (journalism and business); the KU Public Management Center at Topeka (public administration and civil engineering); www.continuinged.ku.edu/pmc; and the KU Edwards Campus for graduate studies generally in the Kansas City area. Write to KU’s Edwards Campus, 12600 Quivira Rd., Overland Park, KS 66213-2402, (785) 864-8400 or (913) 897-8400 for information on programs at that campus. Residence credit courses (education and applied behavioral science) are offered in the Leavenworth public school system, although it is not fully recognized as a center.

The Schiefelbusch Institute for Life Span Studies coordinates KU extramural programs at the Kansas Intellectual and Developmental Disabilities Research Center at Parsons State Hospital and Training Center in Parsons, Kansas, www.parsons.lsi.ku.edu/ParsonsLSI/html/researchcenter.shtml. These programs are offered by the School of Education, the Department of Applied Behavioral Science, and the Intercampus Program in Communicative Disorders.

Continuing Education Classes and Centers

A student who has a baccalaureate degree and wishes to take graduate courses but not to earn a graduate degree may enroll as a special graduate student in continuing education courses. Many of these may be approved for graduate credit. A student admitted for graduate work under nondegree status who subsequently decides to seek a graduate degree may apply for admission as a regular student. The major department makes a recommendation concerning which, if any, of the continuing education courses already completed may count toward an advanced degree. Transferred credit and graduate continuing education credit including distance-learning courses (limited to KU) together may not exceed 6 hours (8 hours if the student holds a baccalaureate degree from KU), and they must not be the last hours required for the degree.

No distance-learning courses or continuing education credit earned elsewhere may be transferred to a student’s record to count toward an advanced degree. Enrollment in approved distance-learning courses offered through KU cannot be used to fulfill the doctoral residence requirement. For maximum combined distance-learning courses and transferred credits, see Credit by Transfer under General Regulations in this chapter of the catalog.

Independent Study/Distance Learning

Independent study may refer to course work taken through Continuing Education or to campus course work independently pursued. No graduate credit is given for Continuing Education Independent Study courses outside of those approved and offered by KU under these distance-education guidelines: Distance learning courses (Internet, interactive television, video, continuing education courses, and others) may be offered for graduate credit only if they are assigned a line number, taught by a member of the KU Graduate Faculty, approved by the dean of the school or college offering the course, and confirmed by the dean of Graduate Studies.

Interinstitutional Programs and Studies

KU participates in a range of graduate programs involving interinstitutional cooperation in the state, in the region, and with other countries.

• A cooperative doctoral program is offered in geology with Kansas State University.
• A cooperative master’s program is offered in civil engineering with Kansas State University.
• By joint agreement with the Kansas Board of Regents and the Board of Curators of the University of Missouri, students from one state may enroll in certain selected degree programs in the other state at resident fee rates.
• The Intersearch Degree of Doctor of Philosophy is offered jointly by KU and the Victorian College of Pharmacy, Melbourne, Australia.

For details, see the appropriate chapters of this catalog and the departments and Graduate Divisions.

International Programs

Lawrence. International Programs, www.international.ku.edu, coordinates international activities on the Lawrence campus, working with area studies centers, professional schools, and other units to provide enriched international opportunities for faculty and students. It helps faculty seek external funding for international projects and administers grants and fellowships for graduate students and faculty. It develops programs for international visitors and outreach initiatives aimed at increasing global awareness and cross-cultural expertise among members of the university, the business community, and the general public. The office actively cooperates with state agencies, community organizations, schools, the private sector, and other groups in the community and region that have international interests.
The following units report to the International Programs office: the Applied English Center, which is responsible for instruction and certification in English as a second language; the Office of Study Abroad, which organizes study abroad for KU students; and the Office of International Student and Scholar Services, which provides nonacademic advising and handles immigration matters for international students.

KU offers Direct Exchange Scholarship programs and other opportunities for study and research (including, where appropriate, foreign language study) at foreign universities through formal agreements. Agreements are now in place with these institutions:

- University of Costa Rica (Costa Rica)
- Université de Franche-Comté, Besançon (France)
- Gornyi Institute, St. Petersburg University (Russia)
- University of Santiago de Compostela (Spain)
- Ivan Franko University, L'viv (Ukraine)

Individual departments, especially foreign language departments, also conduct summer sessions abroad in which KU resident graduate credit may be earned. For information, call or write the University of Kansas, Office of Study Abroad, Lippincott Hall, 1410 Jayhawk Blvd., Room 108, Lawrence, KS 66045-7537, (785) 864-3742.

For information on the above, as well as Fulbright and Boren Graduate Fellowships or other funded opportunities for overseas graduate study and research, consult departments or International Programs, www.international.ku.edu.

KU Medical Center International Programs. International Programs, under the direction of the Vice Chancellor for Academic Affairs, coordinates and facilitates international activities, handles all immigration matters for KU Medical Center, and offers English as a Second Language classes. The office promotes the exchange of students, residents, and faculty members; sponsors international activities on campus; and handles exchange agreements between KU and international medical schools. Active programs link KU Medical Center with Australia, Costa Rica, Ecuador, Germany, Guatemala, India, Ireland, the Netherlands, New Zealand, Paraguay, South Africa, Spain, Swaziland, Tanzania, the United Kingdom, and Vietnam.

General Information

Course Numbering System

Courses that may give graduate credit are numbered according to the following scheme:

- Courses numbered 500-699 are designed primarily for juniors and seniors, but are also taken by some graduate students who have fewer than 30 hours of graduate credit.
- Courses numbered 700-799 are designed primarily for graduate students who have fewer than 30 hours of graduate credit, but they are also taken by some undergraduates.
- Courses numbered 800-899 are designed primarily for graduate students who have fewer than 30 hours of graduate credit.
- Courses numbered 900-999 are designed primarily for graduate students who have 30 or more hours of graduate credit.

Courses that contain a mixture of undergraduate and graduate students should set requirements for graduate credit beyond or different from the requirements for undergraduate credit. No course, regardless of its number, can give graduate credit unless it has been approved for graduate credit by the appropriate Graduate Division and is taught by a person holding a current appointment to the Graduate Faculty.

Credit by Examination

Credit by examination is not accepted toward graduate degrees.

Credit by Transfer

Six hours of graduate credit taken at a regionally accredited graduate school may be transferred and applied to a program leading to one of the master’s degrees if the credit hours were taken before the final semester of enrollment at KU and have the approval of the major department and the appropriate school.

Eight hours may be approved for transfer if the student holds a baccalaureate degree from KU.

The total of transferred credit, including graduate continuing education credit and distance-learning courses taken at KU may not exceed 6 hours, or 8 if the student holds a baccalaureate from KU.

Only work graded B (3.0 on a 4.0 scale) or higher may be transferred. KU does not accept transfer credit for courses that have been graded B– or below. KU also does not accept transfer credit for institutes, workshops, or for life/work experience. Any exceptions to this must be approved by the department, schools/divisions, and Graduate Studies.

Credit does not transfer for courses that were counted toward the requirements for an undergraduate or graduate degree, whether completed at KU or another institution.

No credit is actually transferred toward the doctorate, but departments may take relevant prior graduate work into consideration in setting up programs of study.

To transfer credit, the student’s department must initiate the appropriate paperwork.

Persons with disabilities can receive assistance from Disability Resources, Strong Hall, 1450 Jayhawk Blvd., Room 22, Lawrence, KS 66045-7518, (785) 864-2620 (Voice/TTY).

Information and certification services for eligible veterans and their dependents are available in 1S1 Strong Hall in Lawrence and 3001 Student Center on the KU Medical Center campus.
Enrollment

All graduate students are expected to fit into one of the following enrollment categories—regular, leave of absence, discontinued, dismissed—at all times while completing the credit hours required for the fulfillment of their degrees.

Regular Enrollment. This includes full-and part-time enrollment. Full-time enrollment for a graduate student is 9 credit hours a semester or 6 hours in summer session. Full-time students normally are not permitted to enroll for more than 16 hours a semester or more than 8 hours in summer session as dictated by the Graduate Division. Part-time enrollment for a graduate student is less than 9 credit hours a semester or less than 6 hours in summer session.

A leave of absence may be granted in cases of illness, emergency, to pursue family responsibilities, or to pursue full-time activities related to long-range professional goals. The time taken for a leave of absence does not count against the time limit for earning the degree. However, if the total time for the leave extends more than five years, the student loses his or her place in the program and must reapply for admission. To request a leave of absence, the program must complete a Progress-to-Degree form.

Discontinued. A student may voluntarily resign from a program by requesting a discontinuance. When this request is granted, the student resigns her or his place in the program. If the student chooses to return at a later date, he or she must reapply for admission. Discontinuance is requested through the Progress-to-Degree form.

Dismissed. Graduate programs are responsible for evaluating the students in their programs to ensure that they are making satisfactory progress toward a degree. If the graduate program finds that a student is not making satisfactory progress (due to, but not limited to, cases in which a student has exceeded the time limit for the degree, or a student has neither been enrolled nor received an approved leave of absence for two consecutive semesters, or cases of academic misconduct), the program may recommend to the school or college that the student be dismissed from the program. Dismissal is requested by the graduate program through the Progress-to-Degree form.

Students who have been dismissed from a graduate program may be readmitted for further graduate study at KU only by petition of a Graduate Division that will accept the student. The petition must be approved by the dean of Graduate Studies.

Academic Probation and Dismissal: Upon failing below a cumulative grade-point average of B (3.0), computed including grades earned at KU for all courses acceptable for graduate credit, the student is placed on probation by the Graduate Division of the school or college. The grades of F, S, U, and I, for which no numerical equivalents are defined, are excluded from the computation. If the student’s overall grade-point average has been raised to B (3.0) by the end of the next semester, the student may be returned to regular status. If not, the student may be dismissed unless the Graduate Division acts favorably on a departmental recommendation for the student to continue study.

Graduate Divisions in the schools and the college may have more stringent dismissal policies; consult the school or college.

Grading

The basic system is an A, B, C, D, F system, where A designates above-average graduate work; B, average graduate work; C, passing but not average graduate work (C– is not considered a passing grade); D and F, failing graduate work. C–, D, and F work does not count toward fulfilling degree requirements.

The letter P is used only to indicate participation in thesis, dissertation, and research enrollments (related to thesis or dissertation), and in the first semester enrollment of a two-semester sequence course. In any semester, an instructor may, at his or her option, assign a letter grade of A, B, C, D, or F when evidence about performance is available. Upon completion of thesis/dissertation or research hours leading to a master’s or doctoral degree, the P remains on the final transcript except for the last semester of enrollment. A letter grade (A, B, C, D, or F) is assigned in the last semester of enrollment to characterize the quality of the final product. The I grade is not appropriate for enrollment in thesis, dissertation, or research, and is not accepted.

For enrollments other than thesis, dissertation, or research, the letter I indicates course work that has been of passing quality, some part of which is, for good reason, unfinished.

As stated in University Senate Rules and Regulations, Article II, Section 2.3.2:

“A student who has an I posted for a course must make up the work by the date determined by the instructor, in consultation with the student, which may not exceed one calendar year, or the last day of the term of graduation, whichever comes first. An I not removed according to this rule shall automatically convert to a grade of F or U, or the lapse grade assigned by the course instructor, and shall be indicated on the student’s record.”

The grades of S and U may be used to designate satisfactory and unsatisfactory performance, respectively, in continuing education, workshop, and institute courses upon the recommendation of the department offering the course. No more than 6 hours total of graduate courses graded S are permitted to count toward a degree.
In courses numbered 800 or above for which specific authorization has been given, the instructor may report a grade of S for students who have satisfactorily attended the course but for whom it has not been possible to evaluate the quality of performance. Once the S grade for a particular course (or a particular faculty member’s section of a multi-section course) has been recommended by the department and approved by the Graduate Division, it must be applied to the entire student enrollment in the course or section. This applies to those 800- or 900-level courses eligible for the S grade (or its alternative of F) as well as to Continuing Education, institute, and workshop courses. The S and U grades are not used in computing the grade-point average.

The Credit/No Credit option is not authorized for graduate students’ enrollments, including, but not limited to, courses taken to fulfill the research skills requirements, undergraduate deficiencies, etc. The individual schools have the option of using or not using +/−, according to the policy adopted by the particular school. B− does not represent satisfactory work in graduate studies.

In the grading system defined above, at least a B average is required on course work counted toward any of the master’s degrees or the Specialist in Education degree at KU, and only courses graded A, B, or C (excluding C−) may be so counted. Course work counted toward a doctorate, including that for a master’s degree if obtained at KU, should average better than a B. Courses graded P, S, U, or I are excluded from the computation of the average.

Performance is graded Honors, Satisfactory, or Unsatisfactory for the following examinations:
1. The general examination for the master’s degree.
2. The general examination for the degree of Specialist in Education.
3. The comprehensive oral examination for the doctorate.
4. The final examination for the doctorate.

**Graduate Credit**

Three conditions must be met for a student to receive graduate credit for work satisfactorily completed at KU:
1. The student must have gained graduate admission.
2. The course must have been approved for the award of graduate credit.
3. The instructor must have gained appointment to the Graduate Faculty.

Courses on permanent records assigned course classification codes of S (social welfare) and L (law) do not earn graduate credit and are not reflected in computation of the grade-point average.

**Grievances**

A graduate student who believes himself or herself to be unfairly or unlawfully treated in an academic matter may present a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance at one of these levels is made to the Judicial Board. Guidelines have been established for graduate student petitions in certain categories that may not be under the jurisdiction of other hearing bodies. The Executive Council of the Graduate Faculty has identified two categories as the purview of Graduate Studies:

1. Cases involving the Graduate Divisions of two or more schools or colleges.
2. Cases involving the interpretation of policy as it pertains to the Graduate Division of a school or college.

For disputes involving alleged academic misconduct or alleged violations of student rights, the initial hearing normally is held at the unit level. There is an option to hold an initial hearing at the Judicial Board level if both parties agree, or if either party petitions the Judicial Board chair to hold the hearing at the Judicial Board level and the petition is granted. The petition must state why a fair hearing cannot be obtained at the unit level; the opposing party has an opportunity to respond to the petition.

For information on guidelines, contact Graduate Studies.

**Intellectual Property Policy**

All enrolled students are subject to the Board of Regents and KU Intellectual Property Policies. The ownership of student works submitted in fulfillment of academic requirements is retained by the creator(s). By enrolling, the student gives the institution a nonexclusive royalty-free license to mark on, modify, retain in the process of instruction, or otherwise handle the work, as set out in the institution’s Intellectual Property Policy or in the course syllabus. The institution does not have the right to use the work in any other manner without the written consent of the creator(s). The policy is available in its entirety at the Provost’s Web site: www.provost.ku.edu.

**Language and Research Skills Requirements (Doctoral Degrees)**

See Doctoral Degree Programs.

**Language Requirements (Master’s Degrees)**

There is no general language requirement for any of the master’s degrees, but some departments and programs have such a requirement. Applicants should consult their prospective departments.

**Leave of Absence**

See Enrollment.

**Seniors and Graduate Study (Coenrollment)**

Seniors at KU who will complete the requirements for a baccalaureate degree in a given semester, and who have strong academic records (grade-point average higher than 3.0 on a 4.0 scale), may apply to Graduate Studies for contingent admission as degree-seeking students and request the permission of the appropriate Graduate Division to coenroll for the final undergraduate semester. Seniors requesting the privilege of coenrollment must make formal application through the appropriate Graduate Division for admission.

To meet the criteria of coenrollment, the student must earn undergraduate credit for at least one class during the coenrollment semester. Continuing Education courses may be used to satisfy this requirement. Graduate courses completed beyond the initial semester of coenrollment revert to undergraduate status if coenrolled students fail to complete their undergraduate degrees in the specified semester.

Students who are eligible to coenroll receive an e-mail from the Registrar’s Office before enrollment, with instructions on how to enroll in more than one career (e.g., LAW, GRDL-Graduate, UGDL-Undergraduate). Students will have separate appointment

---

**Sexual Violence Education and Support Services**, (785) 864-3552, offers programs, information, and assistance on issues related to rape, sexual assault, and other forms of sexual violence.

All enrolled students are subject to the Board of Regents and KU Intellectual Property Policies.
times to enroll for each career and must enroll only in courses that count correctly toward the career in which they are enrolling during each appointment time. When enrollment is complete for each career, students must check the grading option for each course to ensure the class will be counted correctly.

Special Conditions for Specified Types of Research
There are certain types of research or activities that may not be pursued unless specific prior approval and/or training has been obtained.

1. Human Subjects Committee, Lawrence. KU requires prior review by the Human Subjects Committee Lawrence (HSCL) of all research projects involving human subjects. There are no exceptions. Although certain types of research may be exempt from record keeping, the committee decides which projects fall in the exempt class. It is the student’s responsibility to become acquainted with HSCL guidelines for research involving human subjects. The committee will consider the conditions of the committee-approved application. Normally these guidelines first are discussed with the student’s advisor, but students are encouraged to contact the HSCL co-coordinator, Mary Denging (785) 864-7385, mdenning@ku.edu, for information, applications, and instructions at any time. Expedited projects may be approved within one week. Committee-reviewed projects may take four weeks. Delays may be avoided by contacting HSCL before submitting applications.

2. Research or Classroom Activities Involving Ionizing Radiation Sources or Class 2, 3, or 4 Lasers. No student may handle sources or machines that emit ionizing radiation or class 2, 3, or 4 lasers unless that student has been appropriately trained and the Environment, Health, and Safety–Radiation Safety Service has verified, documented, and approved that training to be adequate for the proposed activities. Appropriate safety courses or training normally are available during each academic term. A source of ionizing radiation may be used only as specified in an approved permit issued by the EHS–Radiation Safety Service and/or the Laboratory Safety–Laser Safety Subcommittee. The student is responsible for knowing the conditions of the permit under which the activities will be carried out. Usually such activities will be discussed first with the research advisor or classroom instructor, but students may contact the EHS–Radiation Safety Service, (785) 864-4089, at any time.

3. Research or Classroom Activities Involving Biohazards or Hazardous Chemicals. No student may handle biohazards or hazardous chemicals unless that student has been appropriately trained by a qualified individual. (This may be an instructor, a research advisor or classroom instructor, or the EHS–Radiation Safety Service). Activities or projects involving the use of biohazards or hazardous chemicals require that the EHS department be notified. Some projects or activities may require an approved permit issued by the HSCL department, the Laboratory Safety–Biohazard Subcommittee, or the Laboratory Safety–Chemical Safety Subcommittee. Recombinant DNA research must be approved by the Recombinant DNA committee if the student’s activities potentially involve biohazards or hazardous chemicals, prior consultation with the instructor, research advisor, or the EHS department concerning safe use and disposal requirements is mandatory. Contact EHS at (785) 864-4089.

4. Research Involving Animals. All research involving animals requires prior approval of the Institutional Animal Care and Use Committee (IACUC) and must be carried out by individuals appropriately trained as specified in federal regulations and approved by IACUC. The staff of the Animal Care Unit (ACU) conducts orientation and training sessions at the beginning of every semester and as needed. IACUC policy requires attendance at such a session before working with animals. Faculty members are advised of meeting times. Although the student’s adviser should be familiar with requirements, students may contact IACUC at (785) 864-8841 in Lawrence, or (913) 588-7015 at KU Medical Center, for information.

Student Responsibilities
All graduate students are responsible for informing themselves of requirements and policies of the Office of Graduate Studies. See www.grad.ku.edu for the most up-to-date requirements and policies. They are also expected to be familiar with the regulations and requirements of their Graduate Divisions and departments and of their graduate programs. Members of the Graduate Faculty and of the staffs of the Graduate Divisions are ready to answer questions and offer counsel.

It is each graduate student’s responsibility to know and observe all regulations and procedures relating to the graduate degree program the student is pursuing. In no case will a regulation be waived or an exception be granted because students plead ignorance of, or contend that they were not informed of, requirements, regulations, procedures, and deadlines. Responsibility for following all policies and meeting all requirements and deadlines rests with the student.

Time Limit on Graduate Courses
See Program Time Constraints under Master’s Degree Requirements and Doctoral Degree Requirements. See also Grading.

Undergraduate Student Enrollment
Well-qualified undergraduate students may be permitted to enroll in 800- or 900-level courses for undergraduate credit with the approval of the instructor, the student’s adviser, and the Graduate Division. The student must bring a Count Towards Degree form signed by the instructor, a letter of explanation and recommendation from the adviser, and current academic record to the Graduate Division for approval. If approved, the Graduate Division signs the Count Towards Degree form, which the student must present to the staff in the Student Records Center to enroll in the courses. Courses taken for undergraduate credit may not be transferred to graduate credit.

University Faculty and Advanced Degrees
Members of the university faculty having, or eligible for, tenure or holding any rank above that of instructor will not be granted degrees or certificates. Because of the variety of appointments covered by such terms as Lecturer, Associate, or the like, every case must be considered individually, with the student’s department making a recommendation to Graduate Studies before the student begins the graduate degree or certificate program, for students already in graduate programs, before the appointment is made. Although appointing departments are expected to bring this rule to the attention of prospective appointees who plan to seek degrees or certificates, the responsibility for initiating a request for waiver of the rule lies with the student. Waivers may be granted in rare cases where the student and the department demonstrate satisfactorily that circumstances and conditions assure freedom from conflict of interest and undue influence.

Withdrawal from a Course
Complete information about withdrawing from a course is online at www.registrar.ku.edu. Select “Add/Drop/Change of Section” for current procedures. The Office of the University Registrar, Student Records Center, Strong Hall, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7518, (785) 864-4422, kuregistrar@ku.edu, also can provide current information.

Withdrawal from the University
Complete information about withdrawing from all classes is online at www.registrar.ku.edu. Select “Withdraw” for current procedures. The Office of the University Registrar, Student Records Center, Strong Hall, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7518, (785) 864-4422, kuregistrar@ku.edu, also can provide current information.

Tuition and fee rates are subject to change by the Kansas Board of Regents at any time. Current information is available from the Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 151, Lawrence, KS 66045-7518, (785) 864-4422, www.registrar.ku.edu/fees or www.tuition.ku.edu.
Tuition and Fees
For current information about tuition and fees, see www.registrar.ku.edu/fees. Rates are subject to change at any time by the Kansas Board of Regents. Tuition and fees are assessed by the Office of the University Registrar on the Lawrence and KU Edwards Campuses and the Office of the Registrar at KU Medical Center in Kansas City. Tuition and fee rates vary for students according to the program in which the student is enrolled. Students must pay tuition and fees in full by the designated date each term in order to maintain their enrollments. A full description of tuition and fees is available each semester in the online Schedule of Classes, www.registrar.ku.edu. A complete description of applicable tuition, fees, and payment deadlines is available at www.registrar.ku.edu/fees.

Students in Architecture, Arts, Business, Education, Engineering, Journalism, Music, Pharmacy, and Social Welfare, and students on the KU Edwards Campus pay additional course fees. Students taking online courses pay an additional mediation course fee, and additional fees may be added. See www.registrar.ku.edu/fees for current rates.

A complete description and list of applicable tuition, fees, and payment deadlines for the KU Medical Center campus is available at www.kumc.edu/studentcenter/regnroll.html.

Persons over age 60 may audit courses without paying tuition on a space-available basis and with consent of the instructor upon request and proof of age. No Lawrence or Medical Center campus fee is assessed. Students must be nondegree-seeking undergraduate or graduate students. Forms are available at www.registrar.ku.edu/forms.

Late Enrollment Fee
Each student who enrolls late is assessed an additional fee. Fees and applicable dates are announced in the online Schedule of Classes, www.registrar.ku.edu, each term.

Residency Requirements
Kansas statutes and Board of Regents regulations govern who qualifies for resident tuition. This description does not replace or supersede the Kansas statutes or Regents’ regulations. For a copy of the statutes and regulations, write the Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 121, Lawrence, KS 66045-7518.

In general, you qualify for resident rates if you meet three basic criteria: (1) continuous physical residence in Kansas, (2) reliance on Kansas sources of support to meet living expenses, and (3) demonstrated intent to make Kansas your permanent home indefinitely and to reside in the state for purposes other than just educational. You must meet these criteria for 365 days before the first day of the semester in which you wish to pay resident rates. Those who meet the following criteria are also eligible for resident rates:

- Alumni or students of Haskell Indian Nations University.
- Kansas high school graduates who enroll at a Board of Regents institution within six months of high school graduation, who were residents for tuition and fee purposes at some point in the 12 months before graduation, and who remain continuously enrolled at a Board of Regents institution.
- Employees of Kansas Board of Regents institutions who are employed at least 40 percent time and are not seasonal, hourly, or temporary. Their dependents are also eligible.
- Employees who are transferred or recruited to Kansas and their dependents. This privilege is valid for one year.
- Military personnel and their dependents on full-time assignment at a Kansas base.
- Retired military personnel who were assigned to a Kansas base for at least two years, then retired or were honorably discharged and stayed in Kansas.

Books and Supplies
The cost of new textbooks and supplies varies, but is about $500 a year for most students.

Reciprocal Agreements
By joint agreement of the Board of Regents of the state of Kansas and the Board of Curators of the University of Missouri, qualified students who would be eligible to pay only resident rates at the University of Missouri may enroll in certain educational programs at the University of Kansas at the rates paid by Kansas residents. Eligibility requirements include actively pursuing the degree and enrolling in required courses unique to the major.

These programs are the B.Arch., B.S. in architectural engineering, and professional M.Arch.

A reciprocal agreement between Kansas and Iowa allows a qualified Iowa student to enroll in KU’s M.S. program in occupational therapy at resident rates.

Financial Aid
For information about fellowships and scholarships, see the Graduate Studies chapter of this catalog.

Loans
KU’s student loan program is administered by the Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7518, financialaid@ku.edu or www.financialaid.ku.edu.

Tuition Payment
KU pays the tuition and 3 hours of campus fees of graduate students who receive appointments as graduate teaching assistants. The percentage paid by KU depends on the level of appointment.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Appointment</th>
<th>Tuition</th>
<th>Campus Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>40% or more</td>
<td>40% or more</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>30% but less than 40%</td>
<td>30% but less than 40%</td>
<td>30% but less than 40%</td>
<td>30% but less than 40%</td>
</tr>
<tr>
<td>20% but less than 30%</td>
<td>20% but less than 30%</td>
<td>20% but less than 30%</td>
<td>20% but less than 30%</td>
</tr>
<tr>
<td>10% but less than 20%</td>
<td>10% but less than 20%</td>
<td>10% but less than 20%</td>
<td>10% but less than 20%</td>
</tr>
</tbody>
</table>

Where applicable, staff (resident) rates are assessed before tuition is paid. Only graduate students involved in direct classroom or laboratory instruction are eligible for appointments as graduate teaching assistants and for the tuition payment program. Eligibility is limited to the term during which students have instructional appointments. The tuition payment program covers only tuition, including any differential tuition assessed, and 3 hours of campus fees. It is not applicable to the remaining hours of campus fees; KU Edwards Campus construction fee, union fee, and required fees; mediated and Continuing Education course fees; optional fees; housing costs; or other specialized fees.

Graduate Assistantships
Graduate Teaching Assistantships may be available to graduate students through graduate departments. Usual appointments are for one-half-time service. Graduate students should apply directly to the department for GTA appointments.

Graduate teaching assistantships in Lawrence are governed by a memorandum of agreement among KU, the Kansas Board of Regents, and the Kansas Association of Public Employees, which represents KU GTAs in Lawrence. Persons holding GTA appointments must meet the following minimum conditions:

1. During the term of appointment, the GTA must be admitted to and enrolled in a graduate degree program offered by KU.
2. During the term of appointment, the GTA must be enrolled in no fewer than 6 credit hours a semester. GTAs who are unable to enroll in 6 hours for medical reasons or other hardships may petition the Office of Graduate Studies to waive this requirement. They must present supporting documentation and have the approval of the employing department (and the department of study if the two are different). Upon successful completion of the doctoral comprehensive examination and all other require-
ments for doctoral candidacy and upon completion of 18 post-comprehensive credit hours, a doctoral student may qualify for a graduate teaching assistantship by enrolling in one or more credit hours of dissertation, thesis, or equivalent work approved by the Office of the Graduate Studies.

3. During the term of appointment, the GTA must be in good academic standing and make satisfactory progress toward a graduate degree, as determined by Graduate Studies and the department in which the student is enrolled. Students admitted to a degree program on provisional status are not in good standing for the purpose of GTA appointments. A graduate student must maintain a cumulative grade-point average of 3.0 to remain in good academic standing. If a department judges that a graduate student whose grade-point average falls below 3.0 after the first semester at KU is nonetheless making satisfactory progress, the department may recommend to the Office of Graduate Studies that the student be allowed to keep the GTA position for one additional semester.

4. The GTA must satisfy any and all English proficiency criteria established by the Regents and the university.

5. During the term of appointment, the GTA’s assigned duties must consist primarily of direct involvement in classroom or laboratory instruction.

6. The GTA must attend all orientation and training sessions designated as mandatory by either the university or the school or department in which the GTA is appointed. GTAs who fail to do so are subject to immediate termination of the current appointment.

KU also requires that a GTA’s teaching assignment be in his or her field of study or one that is closely related. Out-of-field appointments require consultation with the student’s academic unit and must follow the approval process established by the Office of Graduate Studies. If during the term of appointment a GTA fails to meet any of these conditions, the appointment may be terminated immediately without further review or appeal. Departments may establish more stringent conditions.

If a GTA appointment for an enrolled student is found to be invalid at any time during the term, tuition is assessed for the entire term at the rates listed under Tuition and Fees, Lawrence Campus Courses in the Schedule of Classes, online at www.registrar.ku.edu. The student is responsible for paying the difference between the original assessment and the final assessment. If a graduate student resigns a GTA appointment before the end of the term, tuition and fees are recalculated at the regular rates, and the student is responsible for the difference.

The memorandum of agreement, with additional information on tuition and fee payment, appointments, wages, benefits, and other topics of interest to GTAs, is available on the Graduate Studies Web site, www.graduate.ku.edu.

Graduate Research Assistantships are available to graduate students through grants from federal and private agencies and from state-appropriated research funds. For further information, the applicant should write directly to the chair or graduate adviser of the major department.

To be eligible for a GRA, a student must meet all of the following criteria:

1. The GRA must be a degree-seeking graduate student admitted to a graduate program during the current fall, spring, or summer term.

2. During fall or spring semester, the GRA must be enrolled for no fewer than 6 credit hours required for the graduate degree. During summer session, the GRA must be enrolled in course work related to the graduate program. The number of hours is determined by the adviser and must reflect as accurately as possible the student’s demand on faculty time and university facilities. Generally, an enrollment of 3 credit hours is appropriate for the summer session. Upon successful completion of the doctoral comprehensive examination and all other requirements for doctoral candidacy and upon completion of 18 post-comprehensive credit hours, a doctoral student may qualify for a graduate research assistantship by enrolling in one or more credit hours of dissertation, thesis, or equivalent work approved by the Office of Graduate Studies.

3. A student who has earned a graduate degree may not continue in a GRA appointment after the graduation date unless he or she has just completed a master’s degree and is enrolled in a doctoral program in the same field or a closely related field, or is a doctoral graduate who has been accepted into another graduate program.

4. The research performed for the GRA appointment must be in the student’s field or a closely related field integral to the student’s education (e.g., dissertation topic).

5. During the term of appointment, the GRA must be in good academic standing and make satisfactory progress toward a graduate degree, as determined by Graduate Studies and the department in which the student is enrolled. Students admitted to a degree program on provisional status are not in good standing for the purpose of GRA appointments. A graduate student must maintain a cumulative grade-point average of 3.0 to remain in good academic standing. However, if a department judges that a graduate student whose grade-point average falls below 3.0 after the first semester at KU is nonetheless making satisfactory progress, the department may recommend to the Office of Graduate Studies that the student be allowed to keep the GRA position for one additional semester.

6. The GRA position must be approved by the Office of the Graduate Studies, the Office of Budget Management and Fiscal Services, or the College of Liberal Arts and Sciences. The GRA must be paid through the KU payroll system.

A graduate student who has a research assistantship appointment of at least 40 percent time is eligible for resident tuition rates. Required campus fees; Edwards Campus program, construction, union, and required fees; mediated and Continuing Education fees; housing costs; optional fees; other specialized fees; and course fees still apply. To qualify for the resident rate for fall or spring semester, the student must have a GRA appointment starting no later than the first day of the first full month of the semester and continuing through the 60th class day. To qualify for this rate during the summer, the GRA must have met the eligibility criteria for the preceding fall and spring semesters or must have a GRA appointment starting no later than the first day of the summer session and continuing through the 30th class day.

GRA Tuition Assistance: In certain instances, tuition assistance may be available for GRAs, either through the grant source or...
the tuition assistance program for doctoral graduate research assistants managed by the Office of Graduate Studies. Information is available in the GTA/GRA Information/Documents section of the Graduate Studies Web site, www.graduate.ku.edu. Prospective GRAs should consult the chair or graduate adviser of the major department for more specific information.

**Summer Session Enrollment Requirements.** The 6-hour enrollment criterion does not apply to summer GTA or GRA appointments. To be eligible for a summer session GTA appointment, a student must have met the GTA enrollment criteria above during the previous semester, be enrolled in summer session, or be admitted to a graduate degree program for the next fall semester. To be eligible for a summer session GRA appointment, a student must be enrolled; the number of hours is determined according to the GRA enrollment criteria above. Doctoral candidates must enroll in at least 3 hours during the summer session unless they have completed 18 post-comprehensive hours, in which case enrollment in fewer hours is permitted.

**Health Insurance.** A graduate student who has a GTA, GRA, or combination appointment at the half-time level for a semester is eligible to participate in a health care benefits plan, for which KU provides a contribution. The health care benefits plan is available to all students, regardless of employment status, but students who do not meet the eligibility criteria described above are responsible for the full cost of the plan. Information about the GTA/GRA health care benefits plans, costs, and KU contributions is available from the Office of Staff Benefits, Department of Human Resources and Equal Opportunity, (785) 864-4946, or on the HREO Web site, www.hreo.ku.edu/policies_procedures/student_employment/health_insurance. Information about the general student health plan is available from Watkins Memorial Health Center.

**Non-Native Speakers of English.** All applicants for graduate teaching assistantships whose first language is not English, including international students and U.S. residents or citizens, must submit a score on the Test of Spoken English, administered by the Educational Testing Service at Test of English as a Foreign Language centers in the United States or abroad; a score on the TOEFL Internet-Based Test (iBT), or a score on the SPEAK administered by the Applied English Center at KU. The minimum TSE or SPEAK score necessary for an offer of an assistantship is 50 points. The minimum score for the spoken English portion of the TOEFL iBT is 24; the minimum IELTS score is 8. Applicants who do not attain that score are not eligible for GTA positions but may enroll in an English course for instruction. Students whose first language is not English, regardless of country of origin, previous teaching experience, or department in which the position is sought.

**Other Employment Opportunities**

KU and the community offer a variety of employment opportunities. For further information, contact the University Career Center, (785) 864-3624, www.ucc.ku.edu. A listing of current jobs is available at https://jobs.ku.edu.

---

**Student Services**

**Graduate Student Associations**

**Lawrence.** All KU graduate students on the Lawrence campus are members of the Graduate and Professional Association. GPA is governed by a seven-member elected Executive Committee (GradEx). GPA lobbies for budgetary support to fund graduate student organizations, paper-presentation travel, and the Graduate Student Mentorship Award program. It offers job, grant, and scholarship information. It also represents graduate student interests in university governance, the state legislature, and grievance mediation. GPA co-sponsors campus wide events for graduate students. The office is in 426 Kansas Union, (785) 864-4914, http://groups.ku.edu/~gpa.

**KU Medical Center.** The Graduate Student Council is composed of representatives from all graduate departments on the KU Medical Center campus. GSC sponsors and organizes the annual Student Research Forum. In SRF, students from basic science, medicine, nursing, and allied health give brief presentations of their research in the format of national research meetings. SRF promotes faculty-student and interdepartmental interactions at the research level. GSC also sponsors social events and participates in philanthropic events. It provides orientation information for incoming graduate students at registration. GSC lobbies for student interests on the Kansas City campus and provides student representation on numerous faculty committees at the medical center.

**Health Services and Immunizations**

**Lawrence Student Health Services,** www.studenthealth.ku.edu, is in Watkins Memorial Health Center. Services include general medicine, urgent care, gynecology, allergy injections, immunizations, sports medicine, travel consultation clinic, nutrition counseling, laboratory services, pharmacy, physical therapy, radiology, and health promotion through the Wellness Resource Center. Appointments are encouraged, to reduce waiting time. Fees: Students who pay the full Lawrence campus required fees, which includes a health fee assessed at the time of enrollment, are eligible for some services at no additional cost (e.g., most physician visits). Fees are assessed for ancillary services (e.g., laboratory tests, physical therapy), which are typically offered at below median market charges for the Lawrence area.

**Hours:** 8 a.m. to 8 p.m. Monday through Friday, 8 a.m. to 4:30 p.m. Saturday, 12:30 to 4:30 p.m. Sunday.

**Health Insurance:** At your request, SHS will bill your health insurance company. Any portion not covered by your insurance is your responsibility. Please bring your insurance card or a copy of the front and back of your insurance card the first time you use SHS. You also must contact your insurance company or current health care provider to obtain a referral to use our services.

**All international students must have health insurance.**

**Note:** SHS is not a participating provider for Medicare, Medicaid or HealthWave and, therefore, cannot bill these programs. If you do not have health insurance, a voluntary student health insurance plan is available, sponsored by the Kansas Board of Regents. For more information, call the SHS insurance office at (785) 864-9522 or visit www.uhcnsr.com.

---

The Princeton Review’s “America’s Best Value Colleges” has named the University of Kansas one of the country’s best education values. KU was selected for its outstanding academics, low to moderate tuition and fees, and generous financial aid packages.
Lawrence Immunizations. The University of Kansas requires the following immunizations and/or screenings of its student body:

Measles, Mumps, Rubella. All newly enrolled or re-enrolled students born on or after January 1, 1957, must show proof of two vaccinations for MMR. History of the disease, unless accompanied by positive titer, is not acceptable.

Meningitis. All students living in university-owned group housing must be vaccinated for meningitis or sign a waiver indicating that they refuse to receive the vaccine. SHS strongly recommends that students living in other group housing, such as sorority and fraternity housing or Naismith Hall, receive the vaccine. All students should become knowledgeable about meningitis and its symptoms.

Tuberculosis. All newly enrolled or re-enrolled international students must be screened for tuberculosis by SHS upon arrival on campus and before enrollment.

School of Pharmacy. The School of Pharmacy requires students to provide proof of health insurance coverage and immunizations for MMR, hepatitis B, varicella, tetanus and a current TB skin test.

All vaccines for immunizations are available through SHS. Call (785) 864-9507 to make an appointment. Failure to comply with the requirements above results in an enrollment hold.

KU Medical Center Student Health Services, www.kumc.edu/studentcenter/health, offers outpatient primary care/urgent care, referrals, immunizations, allergy injections, routine physicals, well-woman exams, contraceptive counseling, care for sexually transmitted infections, exposure management, health education and prevention, and travel medications and immunizations. Services are available for students and spouses or partners.

Hours: 8 a.m. to 6 p.m. Monday, 8 a.m. to 6 p.m. Wednesday, 8 a.m. to 4:30 p.m. Tuesday, Thursday, and Friday.

Appointments: Student Health Services operates on a scheduled appointment basis. Every effort is made to accommodate medical needs. Based on staff availability, walk-ins are accepted. Please arrive 15 minutes before your appointment time and bring your insurance card. If a patient is more than 15 minutes late, the appointment must be rescheduled. If you are unable to keep your appointment, notify Student Health Services as soon as possible.

After-Hours Service: If your primary care physician is in the KU Department of Family Medicine, call (913) 588-1908 after clinic hours and on weekends. If your primary care physician is in another KUMC department or outside KUMC, contact that medical office. In case of emergency, call 911 or go to the nearest emergency room.

Health Insurance: All students taking courses at KUMC must maintain health insurance throughout their enrollment. You may choose any health insurance plan. KUMC offers an insurance plan for enrolled students. The Student Health Fee does not provide health insurance. For more information on insurance options, contact Student Health Insurance Verification at (913) 588-4695. Proof of current health insurance (e.g., photocopy of insurance card or letter from health insurance company) and a signed Acknowledgement of the Student Health Insurance Policy form are required. If your insurance changes, bring in a copy of your new insurance card.

KUMC Immunizations. KUMC’s Student Health Center requires completion of childhood immunizations (DPT and polio series), tetanus booster in the last 10 years, and documentation of hepatitis B series and MMR vaccinations. Students who have not had chicken pox must take the varicella immunization. Students who cannot provide documentation of MMR or hepatitis B may obtain titters at the Student Health Center for a fee. Upon entering KUMC, all students must provide documentation of two TB skin tests (PPD) administered and interpreted within 12 months before enrollment. The most recent PPD test should be within three months before enrollment. Students who cannot provide evidence of two PPD tests must take consecutive PPD tests within one to three weeks of each other. All KUMC students must receive an annual TB skin test as recommended by the Centers for Disease Control for all health care employees. Any student with a positive TB skin test must meet with a student health provider to discuss KUMC protocol. For information, see www.kumc.edu/studentcenter/health.

Housing

Lawrence. KU’s housing options are all conveniently on campus and extremely affordable. KU has eight residence halls and 12 scholarship halls. Stouffer Place has apartments for students with families. Jayhawker Towers is an apartment complex for unmarried, upperclass students. Living on KU’s campus is the easiest way to connect with a diverse mix of people. Nonuniversity housing is available. Visit www.housing.ku.edu for information.

KU Medical Center. Apartment complexes, private apartments, and houses are available within walking distance of the Medical Center. See www2.kumc.edu/classifieds/housingads for information.

University Libraries

Dean: Lorraine Haricombe
Watson Library, 1425 Jayhawk Blvd., Room 502
Lawrence, KS 66045-7547
www.lib.ku.edu, (785) 864-4711
Library collections at KU contain more than 4.3 million volumes. The University Libraries system maintains more than 45,000 current periodicals in paper and electronic format to support the research and teaching needs of the KU community. The libraries hold vast collections of microforms, photographs, maps, manuscripts, sound recordings, and other media. The libraries also provide access to a large array of networked bibliographic databases, full-text resources, and the online catalog.

The University Libraries comprise eight library facilities. Most science and business materials are in the Anschutz Library, which also houses most government publications and the T.R. Smith Map Collection. Watson Library houses much of KU’s general collections in the social sciences and humanities. The Kenneth Spencer Research Library contains manuscripts, rare books, regional history materials, and KU’s archival records with specialized collections in natural history, Irish studies, U.S. radical groups, and many other areas. Other libraries include the Spahr Engineering Library, the Thomas Gorton Music and Dance Library (Murphy Hall), the Murphy Art and Architecture Library (Spencer Museum of Art), the KU Edwards Campus Library in Overland Park, Kansas, and the Library Annex, providing storage for lesser-used library materials.

KU Medical Center. Dykes Library of the Health Sciences has a comprehensive health science collection and provides access to a range of electronic resources. For information, visit www.library.kumc.edu. The Clendening History of Medicine Library and Museum contains materials on the history of medicine. Information is available at www.clendening.kumc.edu.

The Kyou portal gives Lawrence and Edwards Campus students access to many online services and resources. Visit https://students.ku.edu.

The myKUMC student portal gives KU Medical Center students access to online resources. Visit https://my.kumc.edu.
Lawrence Campus Services

Academic Offices. Graduate Studies and the dean’s offices provide academic information and support. You may request information from the KU school or department that offers a program in your field of interest or from Graduate Studies.

The University of Kansas School/Department of ____________________________ (street address, see individual listings)
Lawrence, KS 66045

or

The University of Kansas Office of Graduate Studies
Strong Hall, 1450 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7518
graduate@ku.edu, www.graduate.ku.edu, (785) 864-8040

Academic Records and Enrollment
Student Records Center, Strong Hall, 1450 Jayhawk Blvd., Room 151
Lawrence, KS 66045-7518:
Enrollment, Transcripts, Tuition/Fee Questions, (785) 864-4423
Residency, (785) 864-4472
Veterans’ Services, (785) 864-4482
www.registrar.ku.edu

Applications. Submit your application online at www.graduate.ku.edu. Forward all requested supporting documents to the department to which you are applying.

Assistantships. Contact the department that offers a program in your field of interest.

Bookstores
KU Bookstore, Burge Union, Level 2, 1601 Irving Hill Road
Lawrence, KS 66045-7569
www.kubookstore.com, (785) 864-5697
KU Bookstores, Kansas Union, Level 2, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.kubookstore.com, (785) 864-4640

Career Planning Services
School of Business Career Services
Summerfield Hall, 1300 Sunnyside Ave., Room 125
Lawrence, KS 66045-7534
www.business.ku.edu, (785) 864-5591

Engineering Career Center
Eaton Hall, 1520 W. 15th St., Room 1001
Lawrence, KS 66045-7605
www.engr.ku.edu/career_center, (785) 864-3891

School of Journalism and Mass Communications Career Center
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 210
Lawrence, KS 66045-7515
www.journalism.ku.edu/services/careers.shtml, (785) 864-7648

University Career Center
Burge Union, 1601 Irving Hill Road, Room 110
Lawrence, KS 66045-7569
www.ucc.ku.edu, (785) 864-3624

Catalogs
View KU catalogs online at www.catalogs.ku.edu

Child Care
Hilltop Child Development Center, 1605 Irving Hill Road
Lawrence, KS 66045-7570, www.hilltop.ku.edu, (785) 864-4940
Edna A. Hill Child Development Center, (785) 864-0502

Computer Resources
For information about labs and hours, see Computer Labs and Resources: www.computerlabs.ku.edu

The Kyor portal gives Lawrence and Edwards Campus students access to online services and resources at https://students.ku.edu.

Concerts and Recitals
School of Music, www.music.ku.edu, (785) 864-3436
Lied Center Box Office, www.lied.ku.edu, (785) 864-ARTS (2787)
Murphy Hall Box Office, www.kutheatre.com, (785) 864-3982

Student Union Activities, www.suaevents.com, (785) 864-7469

Continuing Education
Continuing Education, 1515 St. Andrews Drive
Lawrence, KS 66047-1619
www.continuinged.ku.edu, (785) 864-5823

Counseling, Personal
Academic Achievement and Access Center
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7518
www.achievement.ku.edu, (785) 864-4064

Counseling and Psychological Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2100
Lawrence, KS 66045-7538
www.caps.ku.edu, (785) 864-2277

Emily Taylor Women’s Resource Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.etwrc.ku.edu, (785) 864-3552

KU Info, 4th floor, Kansas Union, http://kuinfo.ku.edu
walk-in and phone, (785) 864-3506

Office of Multicultural Affairs
Sabatini Multicultural Resource Center, 1299 Oread Ave.
Lawrence, KS 66045
www.oma.ku.edu, (785) 864-4351

Psychological Clinic, Fraser Hall, 1415 Jayhawk Blvd., Room 315
Lawrence, KS 66045-7540
www.psych.ku.edu/psych_clinic/clinic/overview.shtml, (785) 864-4121

Diversity
Office of Multicultural Affairs
Sabatini Multicultural Resource Center, 1299 Oread Ave.
Lawrence, KS 66045
www.oma.ku.edu, (785) 864-4351

Psychological Clinic, Fraser Hall, 1415 Jayhawk Blvd., Room 315
Lawrence, KS 66045-7540
www.psych.ku.edu/psych_clinic/clinic/overview.shtml, (785) 864-4121

English Proficiency
Applied English Center
Lippincott Hall, 1410 Jayhawk Blvd., Room 204
Lawrence, KS 66045-7537
www.aec.ku.edu, (785) 864-4606

KU catalogs and other academic publications are online at www.catalogs.ku.edu.

The Office of Multicultural Affairs sponsors a cultural enrichment program, bringing speakers, films, and cultural and social events to the Lawrence campus.
Equal Opportunity
Department of Human Resources and Equal Opportunity
Carruth-O’Leary Hall, 1246 W. Campus Road, Room 101
Lawrence, KS 66045-7521
www.hreo.ku.edu, (785) 864-3686

Fellowships
The University of Kansas
Office of Graduate Studies
Strong Hall, 1450 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7518
graduate@ku.edu, www.graduate.ku.edu

Graduate Admission Tests
For information about the
• Graduate Management Admission Test (GMAT)
• Graduate Record Examination (GRE)
• Graduate Foreign Language Tests
• Law School Admission Test (LSAT)
• Medical College Admission Test (MCAT)
• Miller Analogies Test (MAT)
Counseling and Psychological Services, Testing Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150
Lawrence, KS 66045-7538
www.testing.ku.edu, (785) 864-2768

Health Service
Student Health Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150
Lawrence, KS 66045-7538
www.studenthealth.ku.edu, (785) 864-9500

Housing
Jayhawker Towers Apartments, 1603 W. 15th St.
Lawrence, KS 66045, (785) 864-8305 or (785) 864-4560
Stouffer Place, (785) 864-8305 or (785) 864-4560
Student Housing Department, Residence Halls
Corbin Hall, 422 W. 11th St.
Lawrence, KS 66045-7617
housing@ku.edu, www.housing.ku.edu, (785) 864-4560

Information and Referrals
Academic Achievement and Access Center
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7518
www.achievement.ku.edu, (785) 864-4064
KU Info, 4th floor, Kansas Union, http://kuinfo.ku.edu
walk-in and phone, (785) 864-3506
Office of the Vice Provost for Student Success
Strong Hall, 1450 Jayhawk Blvd., Room 133
Lawrence, KS 66045-7518
www.vpss.ku.edu, (785) 864-4064, fax: (785) 864-5090

International Students
Applied English Center
Lippincott Hall, 1410 Jayhawk Blvd., Room 204
Lawrence, KS 66045-7537
www.aec.ku.edu, (785) 864-4606

International Undergraduate Admissions
Strong Hall, 1450 Jayhawk Blvd., Room 17
Lawrence, KS 66045-7518
issapps@ku.edu, www2.ku.edu/~issfacts, (785) 864-2616
Office of International Student and Scholar Services
Strong Hall, 1450 Jayhawk Blvd., Room 2
Lawrence, KS 66045-7518
iss@ku.edu, www2.ku.edu/~issfacts, (785) 864-3617

Language Laboratory
Ermal Garinger Academic Resource Center
Wescoe Hall, 1445 Jayhawk Blvd., Room 4070
Lawrence, KS 66045-7594
EGARC@ku.edu, www2.ku.edu/~egarc, (785) 864-4759

Legal Services
Legal Services for Students
Burge Union, 1601 Irving Hill Road, Room 312
Lawrence, KS 66045-7569
legals@ku.edu, www.legalservices.ku.edu, (785) 864-5665

Libraries
Watson Library, 1425 Jayhawk Blvd.
Lawrence, KS 66045-7547
www.lib.ku.edu, (785) 864-3956

Loans
Office of Student Financial Aid
Strong Hall, 1450 Jayhawk Blvd., Room 50
Lawrence, KS 66045-7518
financialaid@ku.edu, www.financialaid.ku.edu, (785) 864-4700

Nontraditional Students
Student Involvement and Leadership Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.silc.ku.edu, (785) 864-4861

Recycling
Dept. of Environmental Stewardship
Varsity House, 1043 Indiana St.
Lawrence, KS 66044-2915
www.recycle.ku.edu, (785) 864-2855

Safety and Crime on Campus
The annual security report about KU safety policies, crime
statistics, and campus resources is available online at www.
u.edu/safety or on paper by contacting the Office of the Vice
Provost for Student Success, Strong Hall, 1450 Jayhawk Blvd.,
Room 133, Lawrence, KS 66045-7518, (785) 864-4060.

Sexual Assault Prevention
Sexual Violence Education and Support Services
Emily Taylor Women’s Resource Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.etwrc.ku.edu, (785) 864-3552

Speech-Language-Hearing Clinic
Schiefelbusch Speech-Language-Hearing Clinic
Haworth Hall, 1200 Sunnyside Ave., Room 2101
Lawrence, KS 66045-7566
www2.ku.edu/~splh/Clinics/SchiefelbuschClinic.html, (785) 864-4690

KU’s academic calendars are online at www.registrar.ku.edu/calendar.

The Office of the University Registrar, 151 Strong Hall, (785) 864-4423,
www.registrar.ku.edu, can answer questions about tuition and fees, enrollment,
residency, transcripts, and veterans services.
Student Activities, Organizations, and Recreation
Jaybowl, Kansas Union Recreation Center
Kansas Union, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.jaybowl.com, (785) 864-3545
KU Memorial Unions, www.union.ku.edu, (785) 864-4651
KU Recreation Services, Ambler Student Recreation Fitness Center
1740 Watkins Center Drive
Lawrence, KS 66045-7571
www.recreation.ku.edu, (785) 864-3546
Office of Multicultural Affairs
Sabatini Multicultural Resource Center, 1299 Oread Ave.
Lawrence, KS 66045
www.oma.ku.edu, (785) 864-4351
Student Involvement and Leadership Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.silc.ku.edu, (785) 864-4861
Student Union Activities, Kansas Union, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.suaevents.com, (785) 864-3477
Student Employment
University Career Center
Burge Union, 1601 Irving Hill Road, Room 110
Lawrence, KS 66045-7569
www.ucc.ku.edu, (785) 864-3624
Student Success
Office of the Vice Provost for Student Success
Strong Hall, 1450 Jayhawk Blvd., Room 133
Lawrence, KS 66045-7518
www.vpss.ku.edu, (913) 588-4060, fax: (785) 864-5090
Students with Disabilities
Disability Resources, Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7518
www.disability.ku.edu, (785) 864-2620 (Voice/TTD)
Study Abroad
Office of Study Abroad
Lippincott Hall, 1410 Jayhawk Blvd., Room 108
Lawrence, KS 66045-7537
www.studyabroad.ku.edu, (785) 864-3742
Testing
Testing Services, Counseling and Psychological Services
Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150
Lawrence, KS 66045-7538
www.testing.ku.edu, (785) 864-2768
University Ombuds Office
Carruth-O’Leary Hall, 1246 W. Campus Road, Room 28
Lawrence, KS 66045-7521
www2.ku.edu/~ombuds, (785) 864-7261
Women’s Resources
Emily Taylor Women’s Resource Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.etwrc.ku.edu, (785) 864-3552

The KUMC Office of the Vice Chancellor for Academic Affairs and Dean of Graduate Studies is at KU Medical Center, 5015 Wescoe Pavilion, Mail Stop 4006, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-6580, Crisis after-hours: (913) 917-6283.

See pages 12-13 for admission procedures.
Information and Referrals
Housing Information and Referrals
Housing Office, KU Medical Center
G116 Student Center, Mail Stop 4006
3901 Rainbow Blvd., Kansas City, KS 66160
housinginfo@kumc.edu, www2.kumc.edu/classifieds/housingads
(913) 588-4695

Libraries
Dykes Library of the Health Sciences
KU Medical Center, Mail Stop 1050
2100 W. 39th St., Kansas City, KS 66160
www.library.kumc.edu, (913) 588-7166

Clendening History of Medicine Library and Museum
KU Medical Center, 1020E Robinson, Mail Stop 1025
3901 Rainbow Blvd., Kansas City, KS 66160
www.clendening.kumc.edu, (913) 588-7244

Loans
Office of Student Financial Aid, KU Medical Center
4007 Student Center, Mail Stop 4005
3901 Rainbow Blvd., Kansas City, KS 66160
financialaid@kumc.edu, www.kumc.edu/studentcenter/financialaid
(913) 588-5170

Registrar
Office of the Registrar, KU Medical Center
3001 Student Center, Mail Stop 4029
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/registrar, (913) 588-7055

Student Activities, Organizations, and Recreation
Kirmayer Fitness Center
KU Medical Center, Mail Stop 1007
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/kirmayer, (913) 588-1532

Office of Student Engagement, KU Medical Center
4007 Student Center, Mail Stop 4005
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/engagement, (913) 588-7244

Student Union Corporation, KU Medical Center
120 Support Services, Mail Stop 2032
2100 W. 36th Ave., Kansas City, KS 66160
(913) 588-3099, fax: (913) 588-1040

Student Employment
Employment Office, KU Medical Center
1052 Wescoe Pavilion, Mail Stop 2033
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/hr, (913) 588-5086

Student Health Insurance
Student Health Insurance, KU Medical Center
G116 Student Center, Mail Stop 4006
3901 Rainbow Blvd., Kansas City, KS 66160
shinsurance@kumc.edu, www.kumc.edu/studentcenter/healthinsure
(913) 588-4695, fax: (913) 588-6597

Student Services
Student Services Division, KU Medical Center
3001 Student Center, Mail Stop 1025
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter, (913) 588-4698

KU Edwards Campus Services
The University of Kansas Edwards Campus
12600 Quivira Road, Overland Park, KS 66213-2402
Phone: 864-8400 (from Lawrence) or (913) 897-8400

Academic Offices
The professional schools and the College of Liberal Arts and Sciences from KU’s Lawrence campus deliver academic information and support to students on the KU Edwards Campus. For questions, contact
Mary E. Ryan, Associate Dean, Academic Affairs
KU Edwards Campus, 12600 Quivira Road
Overland Park, KS 66213-2402
mary@ku.edu, http://edwardscampus.ku.edu, (913) 897-8400

Advising
To contact your academic adviser, visit the Regents Center reception desk or call (913) 897-8400.

Bookstore
KU Edwards Campus Bookstore, Jayhawk Central
12520 Quivira Road, Overland Park, KS 66213-2402
http://edwardscampus.ku.edu/current/jayhawkcentral.shtml

Computer Resources and Educational Technology
Regents Center Library, KU Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
http://edwardscampus.ku.edu/technology, (913) 897-8400

Library
Regents Center Library, KU Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
http://edwardscampus.ku.edu, (913) 897-8570

Regents Center Library, KU Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
www.lib.ku.edu/RCLibrary, (913) 897-8570

Student Success Center
Annette Spates, Program Director, aspates@ku.edu
KU Edwards Campus, 12600 Quivira Rd.
Overland Park, KS 66213-2402
http://edwardscampus.ku.edu/current/studentcenters.shtml
(913) 897-8461

KU offers part-time undergraduate and full- and part-time graduate programs on the KU Edwards Campus, 12600 Quivira Road, Overland Park, KS 66213-2402, http://edwardscampus.ku.edu.

KU Info, (785) 864-3506, http://kuinfo.ku.edu, answers questions and offers information to the KU community.
Independent scholarship, competence in research or other creative work, and the nurture of teaching commitment and skill are the traditional goals of graduate study.

KU has been a leader among public universities in national fellowships, producing 25 Rhodes scholars and 388 student Fulbright award winners since the programs began.
Sara Thomas Rosen, Associate Vice Provost and Dean
Strong Hall, 1450 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7518
graduate@ku.edu or www.graduate.ku.edu, (785) 864-8040

Graduate Studies at the University of Kansas is the administrative unit responsible for graduate education for the Lawrence and Edwards Campuses. The KU Medical Center Office of Graduate Studies is a unit of the Office of Academic Affairs and is responsible for graduate education for the Schools of Allied Health, Medicine, and Nursing. Graduate degrees are conferred by the professional schools and the College of Liberal Arts and Sciences. Appointments to the Graduate Faculty are authorized by the schools and the College and administered by the two Graduate Studies offices.

KU offers the Master of Arts degree in 49 fields, the Master of Science in 35, specific professional master’s degrees in 15 programs, the professional degree of Specialist in Education, and the Doctor of Philosophy degree in 64 fields, as well as professional doctorates of Audiology, Education, Engineering, Occupational Therapy, Physical Therapy, and Musical Arts. KU currently enrolls more than 6,000 graduate students.

Goals of Graduate Study

Independent scholarship, competence in research or other creative work, and the cultivation of teaching commitment and skill are the traditional goals of graduate study. Having acquired a broad education as an undergraduate, the student is expected to master a special field, to learn the methods of investigation employed therein, and to proceed toward making an original contribution to knowledge. Since many of those who earn advanced degrees find careers in higher education, the acquisition of skill in teaching and in directing research is also an essential part of graduate education.

These traditional goals gain renewed significance in changing times, while newly emerging societal interests and needs and new demands of the marketplace both underscore their importance and emphasize the necessity for flexibility in programs and accommodation in career objectives. Careers for graduates in many fields are more broadly dispersed, and the contributions of graduate study and research to society must become more widely spread and recognized in government, business and industry, and in diverse professions and arts. At the same time, entering students must realize that a change in employment patterns for graduates is under way in many fields where the major, if not the sole, employment opportunity after graduation was once to be found in a teaching career.

The Graduate Faculty

The Graduate Faculty consists of members of the university faculty and other persons qualified by training and experience who are duly nominated and appointed. Only members of the Graduate Faculty may teach courses for graduate credit, supervise master’s programs and theses, or serve on doctoral committees.

See current membership criteria for Graduate Faculty status online at www.graduate.ku.edu. Criteria for membership in the Graduate Faculty, revised by the Executive Council of the Graduate Faculty, September 16, 2008:

Regular Graduate Faculty Membership. Regular members of the Graduate Faculty may teach courses for graduate credit, supervise the master’s program and thesis, serve on committees, and sit on doctoral and/or master’s committees. When appropriate, a qualified member of the Regular Graduate Faculty may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with Dissertation Chair status serves as co-chair of the committee and agrees to ensure that all requirements are met. However, if the regular member of the Graduate Faculty has lost dissertation chair status, this does not apply. Present or newly appointed faculty members in tenure-track appointments with the rank of assistant professor or above in departments or programs with approved graduate programs are granted regular membership in the Graduate Faculty, provided they have received the terminal degree in their field of specialization or have acquired equivalent training and/or professional experience as determined by the appropriate Graduate Division. In special cases where faculty members who hold regular membership in the graduate faculty enroll in a KU graduate program as part of their professional development, they may be permitted to retain their graduate faculty status. They may not supervise or serve as the instructor of record.

This table shows the organization and privileges of the various types of Graduate Faculty appointments.

<table>
<thead>
<tr>
<th>Type of Graduate Faculty appt.</th>
<th>Employed by</th>
<th>Type of faculty appt.</th>
<th>Teach graduate courses</th>
<th>Serve on master’s &amp; doctoral committees¹</th>
<th>Chair² master’s committees</th>
<th>Serve as outside member on doctoral committees</th>
<th>Chair doctoral committees</th>
<th>Co-chair doctoral committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Graduate Faculty</td>
<td>KU</td>
<td>Tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes, unless dissertation status was discontinued</td>
</tr>
<tr>
<td>Graduate Faculty with dissertation status</td>
<td>KU</td>
<td>Tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ad Hoc Graduate Faculty</td>
<td>Not by KU or any of its affiliates</td>
<td>Nontenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes, if a Graduate Faculty member with dissertation status serves as co-chair</td>
</tr>
<tr>
<td>Special Graduate Faculty</td>
<td>KU or its affiliates</td>
<td>Nontenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

¹The term “doctoral committee” refers to both oral comprehensive and dissertation defense committees.

²A faculty member with the appropriate status may chair a degree committee alone or co-chair a degree committee with another faculty member (i.e., both co-chairs have equal status). Degree committees cannot have both a chair and a co-chair.
for students who are peers in the graduate program in which they are enrolled. To hold regular membership in the Graduate Faculty, a faculty member must continue to show evidence of a pattern of productive professional activity demonstrating the ability to contribute to high-quality graduate education. The form that productive professional activity may take varies across disciplines. Conventional evidence of such activity includes such things as effective teaching, scholarly publication, participation in professional societies, and other scholarly activity. Graduate degree programs are responsible for monitoring faculty with regular membership in the Graduate Faculty.

Chair of Doctoral Dissertation Committees (Dissertation Status). It is the responsibility of each graduate degree program to establish standards for doctoral dissertation chair status and to nominate members of the Graduate Faculty who provide evidence of scholarship and involvement in graduate education to the dean of Graduate Studies for authorization to chair doctoral committees. It is the responsibility of the dean(s) of the College or school(s) in which the program resides to approve the standards. Upon approval, standards are to be filed with Graduate Studies, and it is the responsibility of Graduate Studies to approve nominees. To qualify for the privilege of chairing doctoral dissertation committees, a regular member of the Graduate Faculty should demonstrate a record of current scholarship, publication, or other contributions to the field. Additional standards, such as a record of teaching graduate courses or a record of advising and mentoring graduate students or service on thesis and dissertation committees, may be established by the program. Authorization for continuation of the privilege to chair dissertation committees is reviewed as part of each periodic graduate program review.

Ad Hoc and Special Graduate Faculty Appointments. When conditions warrant, Ad Hoc and Special membership in the Graduate Faculty may be granted to persons who do not meet all the qualifications for Regular Graduate Faculty membership. The essential condition for such appointments is that graduate education in the department recommending the appointment will be strengthened by the appointments. Ad Hoc and Special appointments are not to be used to avoid employing needed additional tenure-track faculty. Appointments that involve significant exceptions to these rules for membership come before the Executive Council of Graduate Faculty.

Ad Hoc Appointments to the Graduate Faculty may be granted to persons who are not employed by the university or its affiliates but who are uniquely qualified by training or experience for appointment for a specific, named purpose. Such an appointment is for the purpose of (1) teaching a course or courses; (2) cross-listing courses taught as part of a cooperative graduate program between KU and an affiliate's institution as KU courses; (3) serving on the thesis, dissertation, or examination committee of a specific student; or (4) co-chairing a master's thesis committee of a particular student. Ad Hoc appointments are limited to a maximum period of five calendar years for teaching purposes or for the duration of the specified committee assignment. In special cases where faculty members who hold Special membership in the graduate faculty enroll in a KU graduate program as part of their professional development, they may be permitted to retain their Special graduate faculty status. They may not supervise or serve as the instructor of record for students who are peers in the graduate program in which they are enrolled. Emeritus faculty members who wish to continue serving on committees and teaching graduate courses should be appointed to Ad Hoc status. All nominations for Ad Hoc appointments must state clearly the specific purposes for which the nomination is being sought and, when it can be known in advance, the length of time for which it is being requested. When appropriate, a qualified individual with an Ad Hoc appointment may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with dissertation chair status on the Graduate Faculty serves as co-chair and agrees to ensure that all requirements are met.

Special Appointments to the Graduate Faculty may be granted to employees of the university and its affiliates who do not have tenure-track faculty appointments in a department granting graduate degrees but who are uniquely qualified by training or experience for service in the interest of graduate education at KU. Such membership is for the purpose of (1) teaching a course or courses; (2) having courses cross-listed as KU courses if they are part of a cooperative graduate program between KU and the appointee's home institution; (3) serving on the thesis, dissertation, or examination committee of a particular student; or (4) chairing a master's thesis committee of a particular student. Special appointments are limited to a maximum period of five calendar years for teaching purposes or for the duration of the specified committee assignment. In special cases where faculty members who hold Special membership in the graduate faculty enroll in a KU graduate program as part of their professional development, they may be permitted to retain their Special graduate faculty status. They may not supervise or serve as the instructor of record for students who are peers in the graduate program in which they are enrolled. All nominations for Special appointments must state clearly the specific purposes for which the nomination is being sought and, when it can be known in advance, the length of time for which it is being requested. Special appointments are reviewed by the appointing graduate department and continued as appropriate. When appropriate, a qualified individual with a Special appointment may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with dissertation chair status serves as co-chair and agrees to ensure that all requirements are met.

Notice of Nonreappointment and Graduate Faculty Eligibility. Faculty members given a notice of nonreappointment are not eligible to hold Graduate Faculty status in any category. Exceptions to this policy may be requested to allow the faculty member to serve on a graduate student’s committee if the student will meet all degree requirements within the semester. This request must be submitted by the chair of the department of the faculty member receiving the notice of nonreappointment to the appropriate dean of the school/division. If approval is granted, the request is forwarded to the dean of Graduate Studies for final approval.

For a current list of Graduate Faculty, contact the Office of Graduate Studies.

Contact the Office of Graduate Studies for a current list of Graduate Faculty.

All students are responsible for informing themselves of all requirements.
See Student Responsibilities on page 26.
Office of Professional Military Graduate Education

OPMGE assists advanced Armed Forces’ education centers such as the U.S. Army’s Command and General Staff College at nearby Fort Leavenworth, the Naval War College, and the Air Force Academy in maintaining faculty (military and civilian) with the advanced degrees necessary to teach at the highest level and preserve the certifications required by regional accreditation agencies. This effort includes facilitating the education of military officers in the most advanced knowledge, information, research, and methodologies available in the disciplines required by the individual services—the Army, Navy, Air Force, and Marine Corps—as well as major commands such as the Defense Intelligence Agency and Special Operations Command. Such outreach involves developing specialized programs tailored to the needs of military organizations and civilian agencies. The Office of Professional Military Graduate Education also seeks to facilitate the exchange of information, ideas, and knowledge between KU and the armed forces and to promote faculty and student exchanges, joint conferences and seminars, and curricular development and research. By doing so, the Office of Professional Military Graduate Education enhances the capacity of KU and the nation’s military and governmental organizations to serve the nation and the world community.

Fellowships and Scholarships

A number of fellowship awards are offered to recognize academic superiority and to assist meritorious students in the timely completion of their degree programs. The number of fellowships awarded each year depends upon available funds. For a complete description of available fellowships and scholarships, visit the Graduate Studies Web site at www.graduate.ku.edu.

Graduate Teaching Assistantships and Graduate Research Assistantships. See Financial Aid in the General Information chapter of this catalog.

Madison and Lila Self Graduate Fellowships are four-year doctoral fellowships to support outstanding students in the physical sciences, mathematics, engineering, business, economics, and the biological and pharmaceutical sciences. Self Fellows demonstrate the potential and motivation to become notable leaders and to make significant contributions to their chosen professions and to society as a whole. The award includes a stipend of $24,500 plus full tuition and fees up to $44 hours over the four years. Self Fellows participate in a development program that provides general education and training in communication, management, and leadership to help prepare them for future leadership roles. Self Fellows are selected for their vision, career goals, and achievements to date, and because they have the ability to set and attain goals, leadership motivation and potential, and a strong work ethic. Students must be nominated by their departments. The fellowship is open to U.S. citizens only.

Dwight Eisenhower/Clifford Roberts Graduate Fellowships. The Eisenhower Institute has invited KU to screen nominations for Dwight Eisenhower/Clifford Roberts Graduate Fellowships. Awards are made in late April. They help scholars of exceptional leadership complete work for the doctoral degree in such areas as government, history, economics, business administration, and international affairs. Nominees should be preparing their dissertations. Research topics relating to President Eisenhower, the Eisenhower Administration, and issues that were of major concern to him command special attention. The award carries a stipend of $10,000.

Harry S. Truman Good Neighbor Awards. The Harry S. Truman Good Neighbor Award Foundation has invited KU to screen nominations for the Eddie Jacobsen Memorial Foundation Scholarship. Awards are made in May. Applicants must be KU undergraduate or graduate students pursuing study in international relations and diplomacy. The foundation places special emphasis on conflict resolution.

Direct Exchange Scholarship Program. KU maintains direct exchange scholarship programs with the University of Birmingham in England; with the Ecole Supérieure de Commerce/University of Clermont-Ferrand in France; with the Universities of Bonn, Erlangen-Nürnberg, Hamburg, Kiel, Mainz, and Stuttgart in Germany; with the Eidgenössische Technische Hochschule (Federal Institute of Technology) in Zurich, Switzerland; and with the Universities of Nanjing, Nankai, and Zhengzhou in the People’s Republic of China.

Under the agreements with these institutions, KU graduate students receive tuition and an allowance toward maintenance for an academic year of study abroad, and students from the counterpart universities in Europe and China are similarly supported at KU. U.S. students must be enrolled as KU graduate students or graduating seniors (who must gain admission before an award can be made), and each applicant must show how study abroad contributes directly to his or her graduate program. Applicants for study in France, Germany, Switzerland, and the People’s Republic of China must demonstrate satisfactory command of the relevant language. Selection of U.S. scholarship holders is made by the Fulbright/Direct Exchange Scholarship Committee. Application normally is made in the fall for awards in the following academic year. Application forms and detailed information are available from International Programs, www.international.ku.edu/∼oip/students/exchange.

Departmental Fellowships and Traineeships. Various graduate departments offer fellowships or traineeships, funded by external agencies. Visit the Web site of your department or program for more information. A complete list of programs can be found at www.graduate.ku.edu/01-02_departments_list.shtml.

Graduate Student Travel Funds. Graduate students enrolled at least half-time at KU are eligible to apply for assistance from the Graduate Student Paper Presenter fund. Graduate students applying to the fund must be presenting a paper or the disciplinary equivalent at a national or regional meeting of a learned or professional society. Additional information and applications are available online at www.graduate.ku.edu/funding/travel/ppf.shtml. The funds for this award are provided by the Graduate Professional Association and Research and Graduate Studies.

The 2009 edition of U.S. News’ “America’s Best Graduate Schools” ranked 15 KU graduate programs in the top 10 among the nation’s public universities. Thirty KU programs ranked in the top 30.

See pages 12-13 for admission procedures.
Research
Research and graduate studies are integral parts of the university’s educational mission. The National Science Foundation classifies KU as a major university receiving substantial research support. KU is also a Carnegie Doctoral/Research Extensive University and has been a member of the Association of American Universities since 1909. The university has a long and successful record of research collaboration through independent, multidisciplinary research centers that focus on common themes. KU is home to 10 university research centers and institutes, three affiliated centers, two core service labs, the Kansas Geological Survey, and the Kansas Biological Survey. This is in addition to a number of research centers in individual departments and academic units throughout the university. For more information, visit www.ku.edu/research.

Arts and Humanities
Rand McNally’s Places Rated Almanac ranks Lawrence first in the arts among cities of 100,000 or fewer, and KU’s arts scene is one of the reasons. Nationally known artists come to campus every year through Visiting Artists Lectures and Workshops. The Hallmark Design Symposium Series brings nationally and internationally prominent designers, artists, art critics, and visual art educators to campus. Faculty and students in the School of the Arts exhibit work in the Art and Design Gallery along with nationally and internationally known artists. The Wilcox Classical Museum displays full-scale plaster replicas of Greek and Roman sculpture and Greco-Roman antiquities.

Annual recitals feature KU artists in residence, faculty members, and visiting performers. The School of Music, www.music.ku.edu, has information about upcoming performances. The University Dance Company presents two major programs on campus each year, performing a varied repertoire of ballet, modern, and jazz dance. The University Theatre, www.kutheatre.com, stages a dozen works annually at Crafton-Preyer Theatre and in an experimental space named after KU alumnus William Inge.

The Lied Center of Kansas, www.lied.ku.edu, houses a 2,000-seat performing arts hall with excellent acoustic quality and technical production capabilities. It offers a venue for KU productions, Student Union Activities shows, university and community events, and the Lied Center Series.

Spencer Museum of Art
Director: Saralyn Reece Hardy, spencerart@ku.edu
Spencer Museum, 1301 Mississippi St.
Lawrence, KS 66045-7500
www.spencerart.ku.edu, (785) 864-4710, fax: (785) 864-3112
The Spencer’s permanent collection is deep and diverse, currently numbering nearly 36,000 artworks and artifacts in all media. The collection spans the history of European and American art from ancient to contemporary, and includes broad and significant holdings of East Asian art. The museum currently is integrating into its holdings a large ethnographic collection that includes Native American, African, Latin American and Australian objects. Through its collection, exhibitions, and public programming, the Spencer presents distinctive opportunities for dialogue, scholarship, and reflection.

Public programs offer many possibilities for students, faculty, and the community to engage with artists and thinkers from around the world. Varied programs for school children, KU students, and the public include guided tours, gallery conversations, children’s classes and gallery activities, lectures, workshops, films, and music and dance performances. The Student Advisory Board, a multidisciplinary group of undergraduate and graduate students, offers one of many opportunities for volunteer involvement. The Spencer organizes exhibitions of local, regional, national, and international interest.

Hall Center for the Humanities
Director: Victor Bailey, vbailey@ku.edu
Hall Center for the Humanities, 900 Sunnyside Ave.
Lawrence, KS 66045-7622
www.hallcenter.ku.edu, (785) 864-4798, fax: (785) 864-3884
The Hall Center for the Humanities’ primary mission is to stimulate and support research in the humanities, arts, and social sciences, especially of an interdisciplinary kind. The center offers support for graduate student research through the Richard and Jeannette Sias Graduate Fellowship, the Andrew Debdick International Travel Scholarship, and other research and internship opportunities.

Preparing Future Faculty
To support the professional development of graduate students seeking academic positions, Graduate Studies offers the Preparing Future Faculty program. In addition to workshops on the academic job search process, the course GS 800 Preparing Future Faculty provides an overview of academic careers. Additionally, participating doctoral candidates visit and meet faculty from area colleges and universities. Contact Graduate Studies for information.

Graduate Studies Courses
GS 700 Thesis and Dissertation Writing (4). A course focusing on the important principles for writing a thesis or dissertation and on writing a proposal, thesis, or dissertation. Emphasis will be placed on the traits of thesis/dissertation chapters and the essential elements for these chapters. Students will analyze a sample from their field in order to understand the rhetorical structure. In conferences, students will receive feedback on how well the writing reflects the essential chapter elements; they will also receive feedback on their grammar and editing in tutorials. Prerequisite: Permission of instructor. LEC
GS 706 Professional Presentations (3). In this course, you will observe, critique, create and practice scholarly presentations appropriate for conferences, seminars and thesis or dissertation defenses. Based on readings and observations, you will learn the major creative components and organizational structures for conference presentations including: introductions, poster sessions, short lectures or research presentations, and award presentations and acceptances. You will also observe and critique scholars in your field to learn keys to successful presentations in your discipline. You will observe and practice using appropriate delivery modes and skills and develop visual aids for presentations. For the major assignments you will practice and demonstrate the skills above through creation and formal presentations on topics in your field. Time, presentations will vary from 2-3 minute poster sessions to short lecture presentations and will culminate in a major research presentation. Prerequisite: Permission of instructor. LEC
GS 710 Thesis and Dissertation Tutorials (2-6). These tutorials are designed for students who are writing comprehensive exams, proposals, prospectuses, or theses or dissertations. Students will submit their writing to the instructor two days before their weekly meeting, where will review what they have written. Student will be taught strategies for improving content, organization, argument structure, and grammar and editing. They will also read materials about writing effective exams, proposals or thesis or dissertation chapters. Prerequisite: Permission of instructor. IND
GS 750 Professional Writing (4). This class is intended for graduate students who are in the early stages of their degree programs and who need to hone their reading and writing skills. It will help students learn the skills they need to read course materials and write papers for graduate courses. Students will read and analyze the structures of texts and will first be asked to write summaries and summary critiques. In order to accomplish this, they will need to learn first and foremost to paraphrase original texts. They will write investigatory reports that set up literature reviews or proposals. In these final papers, students will be asked to integrate material from readings around a central argument, comment on data or ideas and critique primary sources. Emphasis will be placed on writing genres appropriately, learning to cite and quote primary materials, organizing the content logically, and improving English grammar and usage. In conferences, students will receive feedback on the content, organization, and cohesion of papers. Grammar and editing tutorials will also be a required component of the course. Prerequisite: Permission of instructor. LEC
GS 800 Preparing Future Faculty (1). A course covering current issues in teaching, research, and service for graduate students seeking professional careers in academic settings. Prerequisite: Selection for participation in the Graduate School’s Preparing Future Faculty program, or consent of instructor. LEC
GS 804 Interdisciplinary Seminar on Ethics in Science and Engineering (1-3). The course will cover basic techniques of moral reasoning, especially as applied to ethical issues in the physical sciences and engineering. Topics covered will include the ethical conduct of research, the federal and professional guidelines for differ-
ent kinds of research, and the ethical dimensions of publication and professional life. Emphasis will be on practical applications, cases and student involvement. (Same as MDCM 804, NURU 804, & PTX 804, and PHCH 804.) Prerequisite: Student must be enrolled in STEM discipline. LEC

Preparing Future Professors

To support the professional development of graduate students seeking professional careers outside academia, Graduate Studies offers workshops on seeking careers outside academia. Contact Graduate Studies for information.

KU Medical Center Graduate Studies Courses

The following KU Medical Center Graduate Studies courses are offered for graduate credit.

KU Medical Center Graduate Studies Courses

GSMC 750 Professional Writing (4). This class is intended for graduate students who are in the early stages of their degree programs and who need to hone their reading and writing skills. It will help students learn the skills they need to read course materials and write papers for graduate courses. Students will read and analyze the structures of texts and will first be asked to write summaries and summaries of critiques. In order to accomplish this, they will need to learn first and foremost to paraphrase original texts. They will write investigative reports that set up final research papers or reviews. These final papers will be argument, problem-solution, or evaluative papers in which they will be asked to integrate material from readings around a central argument, comment on data or ideas and critique primary sources. Emphasis will be placed on learning to cite and quote primary materials, organize the content logically, and improve English grammar and usage. In conferences, students will receive feedback on the content, organization, and cohesion of papers. Grammar/editing tutorials will be a required component of the course. Prerequisite: Permission of instructor. LEC

GSMC 800 Scientific Communication (2). Effective use of language to communicate scientific ideas and concepts. Topics include: Intense use of the English language for scientific communication both written and verbal; emphasis will be placed upon verbal; proper pronunciation, grammar, sentence organization, and word choice. Prerequisite: Consent of Instructor. LEC

GSMC 803 Introduction to Clinical Research (1). Course will provide a comprehensive overview to clinical research. The student will gain an understanding of how to develop clinical research questions including protocol design and the factors that should be considered in initiating a clinical research study. This will include biostatistical considerations, the recruitment of study participants, regulatory issues, and data management, and defining measures and instruments. Students will gain knowledge of how to define clinical research among the various institutional entities involved with clinical research at the University of Kansas Medical Center such as the Research Institute (RI), General Clinical Research Center (GCRC) and the Human Subjects Committee (HSC). Additionally, one component of the course will focus on how to apply for funding (grantsmanship), critical appraisal of research studies, and how to present research data. Prerequisite: Consent of Instructor. LEC

GSMC 808 Scientific Communication (0). This course is limited to non-native English speaking students who need to improve the use of the English language for both written and verbal scientific communication; emphasis will be placed upon listening and reading comprehension, grammar, vocabulary, pronunciation, and writing academic essays. Students will attend a weekly lecture and complete written homework and lab assignments. Students will be given an exam at the end of each part of the textbook and will also take a final exam. Class size will be limited to 20 students. Prerequisite: Permission of the Instructor. LEC

GSMC 835 Grammar for Scientific Communication (0). This course is limited to non-native English speaking students who need to improve the use of the English language for both written and verbal scientific communication; emphasis will be placed upon grammar, punctuation, listening and reading comprehension, vocabulary, pronunciation, and writing academic essays. Students will attend two weekly lectures and complete written homework and lab assignments. Students will be given an exam at the end of each part of the textbook and will also take a final exam. Class size will be limited to 20 students. Prerequisite: Permission of the Instructor. LEC

GSMC 840 Clinical Observation in Health Care for Bioengineers (3). This course requires a 6 hour time commitment each week over the semester. During each weekly session the student will observe various medical practitioners in specific health care environments. The course gives the bioengineer an opportunity to see the inside of medical practice and exposes students to medical questions and challenges that could provide opportunities for engineers to contribute to the improvement of medical practice. Each student must select a concentration for this course from a health care specialty depending on availability. Some specialty options may include: Orthopedic, Radiology, Cardiology, Physical Therapy, etc. Grading will be pass/fail based on participation and journal keeping. PREREQUISITES: Graduate engineering standing. Consent of instructor. LEC

GSMC 850 Proteins and Metabolism (2). This course is the first of four lecture units in the first year curriculum of the Interdisciplinary Graduate Program in the Biomedical Sciences. It will cover basic principles of metabolism, protein structure and an introduction to nucleic acids. Prerequisites: Permission of instructor. Students must be admitted into the Interdisciplinary Graduate Program in the Biomedical Sciences. Students must co-enroll in GSMC 852 (Introduction to Biomedical Research). LEC

GSMC 851 Molecular Genetics (2). This course is the second of four lecture units in the first year curriculum of the Interdisciplinary Graduate Program in the Biomedical Sciences. It will cover basic principles of molecular genetics, DNA replication, DNA repair, transcription and translation. Prerequisites: Permission of instructor. Students must be admitted into the Interdisciplinary Graduate Program in the Biomedical Sciences. Students must co-enroll in GSMC 850 (Proteins and Metabolism) and GSMC 851 (Molecular Genetics). LEC

GSMC 853 Cellular Structure (2). This course is the third of four lecture units in the first year curriculum of the Interdisciplinary Graduate Program in the Biomedical Sciences. It will cover basic principles of cellular structure and function. Topics include: the lipid bilayer, membrane proteins, and cellular organelles. Prerequisites: Permission of instructor. Students must be admitted into the Interdisciplinary Graduate Program in the Biomedical Sciences. Students must co-enroll in GSMC 850 (Proteins and Metabolism) and GSMC 855 (Proteins and Metabolism) (Introduction to Biomedical Research). LEC

GSMC 854 Cell Communication (2). This course is the fourth of four lecture units in the first year curriculum of the Interdisciplinary Graduate Program in the Biomedical Sciences. It will cover basic principles of cell communication. Topics include G-protein-coupled signaling, cellular cytoskeleton; cell cycle control; cell death; extracellular matrix; and cancer. Prerequisites: Permission of instructor. Students must be admitted into the Interdisciplinary Graduate Program in the Biomedical Sciences. Students must co-enroll in GSMC 855 (Introduction to Biomedical Research). LEC

GSMC 855 Introduction to Biomedical Research II (2). This is the second semester of a one year series in the Interdisciplinary Graduate Program in the Biomedical Sciences. The course is composed of weekly meetings to discuss research problems, methods and current literature. The course will interface with the lectures and students will learn to critically evaluate our scientific knowledge base. The students will be introduced to the tools that are available to obtain and evaluate information. The students will be challenged to identify areas of our scientific knowledge that require further experimentation and clarification. Prerequisites: Permission of instructor. Students must be admitted into the Interdisciplinary Graduate Program in the Biomedical Sciences. Students must co-enroll in GSMC 856 (Introduction to Biomedical Research). LEC

GSMC 856 Introduction to Research Ethics (1). The objective of this course is to introduce students to research ethics. Students will learn and discuss some of the following areas of ethics in research: 1) sources of errors in science, 2) Scientific Fraud, 3) plagiarism and misrepresentation, 4) conflicts of interest, and 5) confidentiality. Prerequisites: Permission of instructor. Students must be admitted into the Interdisciplinary Graduate Program in the Biomedical Sciences. LEC

See the School of Medicine chapter of this catalog for information about the Interdisciplinary Graduate Program in Biomedical Sciences.

Ninety-seven percent of KU’s full-time faculty have earned the highest degrees awarded in their fields.
Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing.

Graduate programs in dietetics and nutrition, hearing and speech, molecular biotechnology, nurse anesthesia, occupational therapy, physical therapy, rehabilitation science, and therapeutic science are offered in Kansas City. Graduate programs in hearing and speech are offered cooperatively with the Lawrence campus.

Basic admission requirements are listed in the General Information chapter of this catalog. Individual graduate programs have specific requirements including prerequisite undergraduate courses. These are listed or referenced in program descriptions.

The School of Allied Health offers a Dietetic Internship graduate certificate and the following graduate degrees, in cooperation with other academic units:

- Master of Arts
- Master of Occupational Therapy
- Master of Science
- Doctor of Audiology
- Doctor of Occupational Therapy
- Doctor of Physical Therapy
- Doctor of Philosophy

For online information about graduate programs, see www.alliedhealth.kumc.edu.

Graduate Studies

KUMC Graduate Studies sponsors a number of interdiscipli- nary courses as well as courses in English as a second language. See the Graduate Studies chapter of this catalog.

Clinical Laboratory Sciences

Chair: Venus Ward
KU Medical Center, G014 Eaton, Mail Stop 4048
3901 Rainbow Blvd., Kansas City, KS 66160
www.biotech.kumc.edu, (913) 588-5220
Graduate Director: Eric Elsinghorst, eelsinghorst@kumc.edu, G002 Eaton, (913) 588-1089

Master of Science in Molecular Biotechnology

The Master of Science in molecular biotechnology is a two-year nonthesis program that provides broad-based knowledge and skills to prepare students for advanced careers in molecular biotechnology-oriented clinical, industrial, and research laboratories. Students receive training in the use and application of advanced methodologies and instrumentation as well as critical thinking, troubleshooting, and communication skills. The application of these skills to research and development is emphasized. The curriculum provides broad-based training and experience through course work and practica in biotechnology settings. The core curriculum includes biochemistry, cell and developmental biology, molecular biology, molecular techniques, research ethics, biotechnology issues, and radiation safety. Practical skills are built through lecture and laboratory course work in the theory and application of molecular biotechnologies. Students perform three practica in biotechnology research and development settings.

Admission. Applications are considered in accordance with KU admission requirements. Applicants must have earned a baccalaureate degree in a life science (e.g., biochemistry, biology, cell biology, clinical laboratory sciences, microbiology, molecular biosciences) or chemistry before enrolling in the program. An applicant with a degree in another area can be considered if all prerequisite course work is completed before enrolling in the program. Applicants should have minimum grade-point averages of 3.0 on a 4.0 scale. Applicants with lower averages may be considered for probationary or provisional admission. Applicants must fill out a KUMC Graduate Studies application. Additional application materials include official college transcripts; Graduate Record Examination scores for the verbal, quantitative, and analytical tests (taken within two years of the initial semester); three letters of recommendation from faculty members and employers; a one-page personal statement describing the applicant’s educational and career goals; and a history of the applicant’s research and work experience or a résumé. International students should have an official copy of Test of English as a Foreign Language scores (taken within the last two years) sent to the CLS graduate director. Before enrolling, the following courses or their equivalents must be completed: general chemistry (two semesters), organic chemistry lecture and laboratory (at least one semester), biochemistry (one semester), genetics (one semester), cell biology (one semester), calculus (one semester), physics (one semester). Students start the program in the fall semester only. The application deadline is February 1.

Degree Requirements. The M.S. in molecular biotechnology is a minimum 40-credit-hour program designed to be completed in two years if pursued full time. The core curriculum is completed in the first year. Students enroll in three semester-long practica in the summer, spring, and fall terms of the second year. Each practicum is performed at a different site to provide a different molecular biotechnology emphasis. Practicum sites emphasize bioscience research, biotechnology industrial applications, or molecular diagnostics. The practica provide extensive hands-on experience with molecular technologies as well as experience in bioscience. Students work with investigators, laboratory staff, and others in the activities of the practicum site. While students are enrolled in a practicum, their primary academic obligation is at that site; students engage full time in practicum activities. This dedicated effort allows students to understand in depth the theory and application of advanced molecular techniques and technologies. Studying at a single practicum site for a full semester allows students to gain an
appreciation of the day-to-day opportunities, obligations, and realities of professionals in molecular biotechnology. Students also complete Journal Club and Scientific Writing courses during the second year of the program. During the second spring semester, a final general examination is required. This consists of a written and an oral examination. Successful completion of the written component is required before taking the comprehensive oral examination over general knowledge of molecular biotechnology concepts and applications.

This program is not well suited to part-time study, particularly the practicum component. However, it is possible to extend the course of study over more than two years by delaying the recommended schedule of courses.

**Recommended Course Sequence**

<table>
<thead>
<tr>
<th>Fall Semester 1</th>
<th>(10 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GSMC 850 Proteins and Metabolism</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GSMC 851 Molecular Genetics</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GSMC 852 Introduction to Biomedical Research I</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CLS 710 Molecular Techniques I</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CLS 711 Molecular Techniques Laboratory I</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Semester 1</th>
<th>(12 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GSMC 853 Cellular Structure</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GSMC 854 Cell Communication</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GSMC 855 Introduction to Biomedical Research II</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>GSMC 856 Introduction to Research Ethics</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CLS 720 Molecular Techniques II</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CLS 721 Molecular Techniques Laboratory II</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CLS 730 Current Issues in Biotechnology</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer Session 1</th>
<th>(6 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOI 702 Laboratory Practice: Radiation Safety Procedures</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>BIOL 703 Radiosotopes and Radiation Safety in Research</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>CLS 750 Practicum I</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall Semester 2</th>
<th>(6 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CLS 751 Practicum II</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>CLS 740 Journal Club</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Semester 2</th>
<th>(6 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CLS 752 Practicum III</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CLS 742 Scientific Writing</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Clinical Laboratory Sciences Courses**

**CLS 520 Phlebotomy** (1).

**CLS 523 Fundamental Analytical Techniques Laboratory** (2).

**CLS 530 Clinical Chemistry I** (3).

**CLS 531 Clinical Chemistry I Laboratory** (1).

**CLS 532 Clinical Microbiology I** (3).

**CLS 533 Clinical Microbiology I Laboratory** (3).

**CLS 536 Hematology I** (3).

**CLS 537 Hematology I Laboratory** (2).

**CLS 540 Clinical Chemistry II** (2).

**CLS 541 Senior Seminar in CLS** (2).

**CLS 542 Clinical Microbiology II** (2).

**CLS 543 Clinical Microbiology II Laboratory** (2).

**CLS 544 Immunohematology I** (3).

**CLS 545 Immunohematology I Laboratory** (2).

**CLS 546 Hematology II** (3).

**CLS 547 Hematology II Laboratory** (2).

**CLS 549 Clinical Immunology I Laboratory** (2).

**CLS 605 Introduction to Molecular Biotechnology I** (1).

**CLS 610 Advanced Biotechniques Lecture** (3).

**CLS 611 Advanced Biotechniques Laboratory** (2).

**CLS 615 Journal Club** (1).

**CLS 620 Radiation Safety** (1).

**CLS 621 Biotechnology Methodologies Practicum** (4).

**CLS 622 Problems in Molecular Genetics, Molecular Diagnostics, Proteomics, and Molecular Immunology** (4).

**CLS 623 Molecular Genetics Practicum** (4).

**CLS 625 Cytogenetics Practicum** (4).

**CLS 627 Protein Structure/Function Practicum** (4).

**CLS 629 Cytokine/Chemokine Practicum** (4).

**CLS 631 Molecular Immunology Practicum** (4).

**CLS 633 Special Topics Practicum** (4).

**CLS 640 Clinical Chemistry III** (2).

**CLS 641 Clinical Chemistry Practicum** (3).

**CLS 642 Clinical Microbiology III** (2).

**CLS 643 Clinical Microbiology Practicum** (3).

**CLS 644 Immunohematology II** (1).

**CLS 645 Immunohematology Practicum** (1).

**CLS 646 Hematology II** (3).

**CLS 647 Hematology Practicum** (3).

**CLS 648 Clinical Immunology II** (1).

**CLS 649 Clinical Immunology Practicum** (1).

**CLS 650 Clinical Laboratory Science Review** (1).

**CLS 655 Molecular Biotechnology Review Course** (1).

**CLS 661 Management Principles in Health Care** (3).

**CLS 670 Principles of Education in Clinical Laboratory Science** (1).

**CLS 690 Special Topics** (1-5).

**CLS 705 Fundamentals of Pathophysiology** (3). Review of integrative human physiology with an emphasis upon homeostatic mechanisms and etiologies of disease. The interrelationships of function and dysfunction at the molecular, cellular and tissue level (pathology), organ and systemic level (impairment), and to the total human body (functional limitations) will be applied in each of the body systems. Discussions and applied materials will be tailored to the professional student population. Prerequisite: Admission to the Dietetics and Nutrition program or permission of the instructor(s), LEC.

**CLS 710 Molecular Techniques II** (2). A lecture course covering the theory underlying molecular techniques involving nucleic acids. Topics include purification and analysis of nucleic acids, recombinant DNA, construction and screening of genetic libraries, genetic engineering, control of gene expression, construction of gene hybridization, amplification, and nucleic acid databases and their analysis. This course is meant for graduate students in the Molecular Biotechnology program. Prerequisite: Consent of instructor, LEC.

**CLS 711 Molecular Techniques Laboratory I** (2). A laboratory course that introduces students to the application and practice of molecular techniques involving nucleic acids. Topics include purification and analysis of nucleic acids, recombinant DNA, genetic engineering, control of gene expression, construction of gene fusions, amplification, and hybridization. Topics are covered through a project-based approach. This course is meant for graduate students in the Molecular Biotechnology program. Prerequisite: Consent of instructor. LAB.

**CLS 720 Molecular Techniques Laboratory II** (2). A lecture course covering the theory underlying molecular techniques involving proteins. Topics include fractionation of prokaryotic and eukaryotic cells, protein extraction and quantification, native and denaturing electrophoresis, protein purification and solubilization, analysis of protein-protein interactions, construction of fusions, site directed mutagenesis, control of protein expression, and proteomics. This course is meant for graduate students in the Molecular Biotechnology program. Prerequisite: Consent of instructor. LAB.

**CLS 721 Molecular Techniques Laboratory II** (2). A laboratory course that introduces students to the application and practice of molecular techniques involving proteins. Topics include fractionation of prokaryotic and eukaryotic cells, protein extraction and quantification, native and denaturing electrophoresis, protein purification and solubilization, analysis of protein-protein interactions, construction of fusions, site directed mutagenesis, control of protein expression, and proteomics. This course is meant for graduate students in the Molecular Biotechnology program. Prerequisite: Consent of instructor. LAB.

**CLS 740 Journal Club** (1). This course is an introduction to the critical reading of journal articles from the current literature in molecular biotechnology. Discussions will emphasize the analysis of experimental design and technique, as well as the significance of the results and validity of the author’s conclusions. Students will learn how to search for articles and background information pertaining to selected topics, how to present a polished, professional summary of that literature. Assigned papers for discussion and student presentations will focus on new strategies and technologies in molecular biotechnology of wide fundamental importance, or on hypothesis-based research that uses molecular biotechnological approaches. Prerequisite: Completion of (or concurrent enrollment in) CLS 710 and CLS 720. LEC.

**CLS 742 Scientific Writing** (1). Formats, techniques, and styles of scientific writing. Emphasis will be placed on clear, concise, and effective writing. The class will focus on the process of writing scientific manuscripts and grant proposals. Students will identify and define the sections of scientific manuscripts as well as grant proposals. During the course, each student will write an R21-type (NIH Exploratory/Developmental Research Grant) proposals as could be submitted to the most appropriate NIH Institute. This course is meant for students enrolled in their final semester of the Master of Science in Molecular Biotechnology program. Prerequisite: Consent of instructor LEC.

**CLS 744 Topics in Molecular Biotechnology** (1-5). Advanced course on special topics in molecular biotechnology, offered by arrangement. May include lectures, discussions, readings, laboratory techniques, and supervised research experience. This course is intended for graduate students in the Molecular Biotechnology program. Prerequisite: Consent of instructor. LEC.

**CLS 750 Practicum I** (4). Advanced practical experience in a selected laboratory focused on nucleic acid-based diagnostic methodologies and technologies. Students apply and extend their knowledge and skills by performing a research and/or development project under the supervision of a site mentor. This practicum is performed...
at a site other than those utilized for CLS 751 (Practicum II) and CLS 752 (Practicum III). Prerequisite: Completion of CLS 710, CLS 711, CLS 720, and CLS 721. PRA

CLS 751 Practicum II (5). Advanced practical experience in a selected laboratory actively pursuing applied or basic research questions utilizing genetic, biochemi- cal, or other molecular biology-related approaches. Students apply and extend their knowledge and skills by performing a research and/or development project under the supervision of a site mentor. This practicum is performed at a site other than those utilized for CLS 750 (Practicum I) and CLS (Practicum III). Prerequisite: Completion of CLS 710, CLS 711, CLS 720, and CLS 721. PRA

CLS 752 Practicum III (5). Advanced practical experience in a selected laboratory actively pursuing applied or basic research questions utilizing genetic, biochemi- cal, or other molecular biology-related approaches. Students apply and extend their knowledge and skills by performing a research and/or development project under the supervision of a site mentor. This practicum is performed at a site other than those utilized for CLS 750 (Practicum I) and CLS 751 (Practicum II). Prerequi- site: Completion of CLS 710, CLS 711, CLS 720, and CLS 721. PRA

Communicative Disorders: Intercampus Program

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing: Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus.

Speech-Language Pathology courses are listed under Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog. Audiology courses are listed in this chapter.

The intercampus program offers Master of Arts and Doctor of Philosophy degrees in speech-language pathology and audiology, as well as the Doctor of Audiology. The M.A. program in speech-language pathology and the Au.D. program in audiology are fully accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association. The audiology program also offers a combined Au.D./Ph.D. track to facilitate the completion of both degrees within a six-year period.

Hearing and Speech, KU Medical Center:

Chair: John Ferraro, jferraro@ku.edu
KU Medical Center, 3031 H.C. Miller Building, Mail Stop 3039
3901 Rainbow Blvd., Kansas City, KS 66160
www.hearing.kumc.edu, (913) 588-5937

Speech-Language-Hearing: Sciences and Disorders, Lawrence:

Chair: Hugh Catts, catts@ku.edu
Dole Human Development Center, 1000 Sunnyside Ave, Room 3001
Lawrence, KS 66045-7561, www2.ku.edu/~sphl, (785) 864-0630
Professors: Barlow, Catts, Ferraro, Fey, Rice
Associate Professors: Chertoff, Jackson, Loeb, Searl, Storkel, Widen
Clinical Associate Professor: Wegner
Assistant Professors: Auer, Brady, Ferguson, Johnson
Clinical Assistant Professors: Bunce, Daniels, Keener, KennaIdey
Clinical Instructors: Banks, Gatts, Gillispie, Grosche, Haring, Johnston, Waggoner
Adjunct Faculty: Ator, Barohn, Baumgartner, Burns, Durham, McCall, Steele, Storms, Staecher

Audiology Courses

For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog.

AUD 550 Beginning Clinical Practice in Audiology (1-3).

AUD 805 Introduction to Clinical Research (1). The course will provide a compre- hensive overview to clinical research. The student will gain an understanding of how to develop clinical research questions including protocol design and the factors that should be considered in initiating a clinical research study. This will include biostatistical considerations, the recruitment of study participants, regulatory issues, and data management, and defining measures and instruments. Students will gain knowledge of how to define clinical research among the various institutional entities involved with clinical research at the University of Kansas Medical Center such as the Research Institute (RI), General Clinical Research Center (GCRC) and the Human Subjects Committee (HSC). Additionally, one component of the course will focus on how to apply for funding (grantmanship), critical appraisal of research studies, and how to present research data. Prerequisite: Consent of instructor. LEC

AUD 810 Diagnostic Audiology (4). Audiometric calibration, pure tone and speech testing, analysis of audiograms, middle ear testing. Prerequisite: AUD 697. LAB

AUD 811 Hearing Disorders (3). A study of disorders of the auditory system in- cluding anatomical, physiological, perceptual, and audiological manifestations of pathologies affecting hearing. Prerequisite: AUD 810 and AUD 829. LAB

AUD 813 Psychoacoustics and Theories of Hearing (3). A study of relations be- tween common acoustic stimuli and the responses they elicit; consideration of sensory scales, noise phenomena, and speech intelligibility. Prerequisite: AUD 697 and AUD 829. LAB

AUD 814 Hearing Conservation (3). A study of the major components of hearing conservation programs in industrial, educational, and military settings. Forensic audiology issues related to occupational hearing loss are included. Prerequisite: AUD 697 and AUD 829. LAB

AUD 815 Counseling for Audiology (2). Presentation/Discussion of psychologi- cal/counseling theories and techniques and how they relate to the profession of audiology. LEC

AUD 816 Speech Perception (2). Acoustic and perceptual characteristics of phonemes, words, and connected speech for normal-hearing adults and infants; how speech perception is assessed clinically and is affected by hearing loss, aging, use of amplification, talker differences, and linguistic factors. LEC

AUD 817 Pediatric Audiology (3). Normal and pathological development of the audi- tory system; pediatric audiometric testing; auditory and communication aspects in the habilitation of hearing-impaired children. Prerequisite: AUD 697 and AUD 810. LAB

AUD 818 Vestibular Systems and Disorders (3). Study of the anatomy and physi- ology of the normal peripheral and central vestibular system; clinical assessment of vestibular disorders; vestibular rehabilitation. LEC

AUD 819 Hearing Aids I (3). Theoretical bases, techniques, and clinical applications of hearing aids and their assessment. Participants will review, present, and discuss contemporary issues in hearing aid literature and research. Prerequisite: AUD 819. LEC

AUD 820 Rehabilitative Audiology (3). Principles and methods of auditory, communi- cation, and social assessment and intervention with hard of hearing and deaf adults, children, and their families. Prerequisite: AUD 810 and AUD 819 or equivalent. LEC

AUD 821 Hearing Aids II (3). The advanced study of the theoretical bases, tech- niques, and clinical application of hearing aids and their assessment. Participants will review, present, and discuss contemporary issues in hearing aid literature and research. Prerequisite: AUD 810. LEC

AUD 822 Electro-Acoustics and Instrumentation (3). A study of the generation, control and measurement of the simple and complex sounds essential to clinical audiology and hearing research. LAB

AUD 823 Cochlear Implants and Hearing Assistance Technologies (2). Through lecture and discussion format, this course will cover the principles and methods of assessment, candidacy, surgery, programming and rehabilitation of patients receiving cochlear implants. In addition, hearing assistance technologies such as large area systems and alerting devices will be covered with emphasis on classroom amplification. Prerequisites: AUD 819 and AUD 821 or permission of instructor. LEC

AUD 824 Central Auditory Processing (2). The study of the anatomy and physiolog- y of the central auditory system. Analysis and review of the diagnostic proce- dures and the therapeutic auditory processing for the adult. LEC

AUD 829 Anatomy and Physiology of the Hearing and Vestibular Mechanisms (3). Advanced study of the anatomical and physiological properties of the human hearing and vestibular mechanisms. LEC

AUD 843 Clinical Practice in Audiology (1-6). Supervised clinical work at the Uni- versity and/or University Medical Center audiology clinics, or affiliated, off-camp- us practicum sites. Prerequisite: Permission of instructor. FLD

AUD 846 Independent Study in Problems in Audiology (1-10). IND

AUD 851 Auditory Evoked Potentials (3). Theoretical bases, techniques, and clini- cal applications for auditory evoked potentials including electrocorticography, auditory brainstem response, middle and late latency and cognitive responses. Prerequisite: AUD 810, AUD 822, AUD 829, or permission of instructor. LEC

AUD 899 Thesis (1-10). THE

AUD 940 Seminar in Audiology: ___ (1-4). Advanced study of selected topics in au- diology such as (but not limited to): cochlear micromechanics and other physiologi- cal models of hearing, psychoacoustics, speech perception, cochlear implants, etc. Prerequi- site: Enrollment in the Audiology Ph.D. program or permission of instructor. LEC

AUD 940 Grand Rounds in Audiology (1). Presentations/discussion of clinical case studies and professional issues in Audiology. Au. D. students and audiology fac- ulty members who participate in case discussions. DIS

AUD 944 Clinical Rotation (5-8). Supervised clinical work at the University and/or University Medical Center Audiology Clinics, or affiliated off-campus sites. The Clinic Rotation is intended to prepare students for entry into their Clini- cal Externship and to foster increased, independent and critical thinking. Prerequisites are de- fined in standards set forth by the American Speech-Language Association. FLD

AUD 945 Clinical Externship (3-9). Supervised clinical work at the University of Kansas and/or KUMC audiology clinics, or affiliated, off-campus sites. The Clinical Externship is intended to refine clinical skills, increase clinical independence, and assure that clinical skills and graduation standards in audiology set forth by the American Speech-Language Association. Open to 3rd and 4th year Au.D. students. Approval from Instructor needed for 3rd year students. PRA

AUD 999 Doctoral Dissertation (1-12). THE
**Dietetics and Nutrition**

Chair: Debra Sullivan  
KU Medical Center, 4019 Delp Pavilion, Mail Stop 4013  
3901 Rainbow Blvd., Kansas City, KS 66160  
www.dietetics.kumc.edu or sjones@kumc.edu, (913) 588-5355  
M.S. Program Director: Linda Griffith, lgriffith@kumc.edu,  
4096 Delp Pavilion, (913) 588-7652  
Dietetic Internship Director: Rachel Barkley, rbarkley@kumc.edu,  
4065 Delp Pavilion, (913) 588-7683

Professor: Carlson  
Professor Emerita: Frakes  
Associate Professors: Barkley, Beyer, Hise, Sullivan  
Assistant Professors: Griffith, Leidy, Garmella, Goetz  
Clinical Instructor: Baxter

The department offers two programs. The Dietetic Internship Graduate Certificate Program is fully accredited and includes graduate credit that can be applied to an M.S. degree. The M.S. degree in dietetics and nutrition includes thesis and nonthesis options.

**Admission**

In addition to KU admission requirements, the Graduate Record Examination is required for both programs. The institutional copy of the applicant’s GRE scores must be submitted to the department. It is recommended that the applicant achieve a combined score of at least 1000 for the verbal and quantitative sections of the general test and a score of 3.5 on the analytical section.

An applicant to the dietetic internship must have a bachelor’s degree and course work from a didactic program in dietetics approved by the American Dietetic Association. Applicants follow the national computer-matching procedure mandated by the American Dietetic Association for application to internships. Sixteen students are admitted annually. Successful completion of the internship allows the student to take the examination to become a Registered Dietitian. Dietetic interns earn 14 hours of graduate credit upon completion of the certificate program.

An applicant to the M.S. program must have a bachelor’s degree from a regionally accredited college or university with at least one 3-credit-hour course in biochemistry, physiology, and nutrition. The GRE is required for admission along with three letters of recommendation. International students must meet minimum English Proficiency Requirements. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information.

**Degree Requirements**

The M.S. degree thesis option requires 30 credit hours. The M.S. degree nonthesis option requires 33 credit hours.

- **Required Courses**: The asterisk (*) indicates courses approved for the intra-institutional online program only.
  - **Thesis Option**: DN 899. Thesis research can be done over several semesters. It involves all aspects of research including a proposal, collection and analysis of data, and a thesis. The thesis is presented in written form and orally in a 30-minute presentation to the department with 30 minutes of questions from the thesis committee. A 30-minute oral examination is required.
  - **Nonthesis Option**: DN 854. The project is completed in one semester. It may include one or more of the following:
    - Writing an intensive review of the literature on a given topic.
    - Participation with a faculty member in the development of a research proposal or grant.
    - Participation with a faculty member in conducting a pilot project.
    - Participation with a faculty member in the design, implementation, or evaluation of a program in a specialized area of dietetics practice.
    - Collection and/or analysis of data in conjunction with a faculty member engaged in research.

A one-page written proposal and write-up of the project and a 30-minute oral presentation to the department are required. A one-hour oral general examination is required.

**Dietetics and Nutrition Courses**

The asterisk (*) indicates courses approved for the intra-institutional online program only.

- DIET 660 Management of Human Resources in Dietetics (6).
- DIET 661 Management of Food Processing and Service (6).
- DIET 662 Special Problems in Food Service Management (3).
- DIET 670 Applied Normal Nutrition (3).
- DIET 671 Nutrition in Medical Science (6).
- DIET 672 Nutrition Care of Patients (6).
- DIET 675 Seminar in Dietetics and Nutrition (1).
- DN 796 Social and Cultural Aspects of Dietetics and Nutrition (2-4). A study of the aspects of society, culture and personality related to diet, food habits, and nutrition. The role of the community and its agencies will be considered. Includes field work. Pre-requisite: Consent of instructor. LEC
- DN 800 Selected Topics in Clinical Dietetics: (1-6). A learner-centered, self-paced study of topics in applied clinical dietetics. Independent modules are offered to address the science and art of nutritional care relating to specific issues to clinical dietetics. Topics will be grouped in various combinations to provide flexibility of choice. Students may enroll in one or more topics for a total of six credit hours. Pre-requisite: By permission of instructor only. LEC
- DN 810 Nutrition Assessment (3). Methods and tools used in screening and assessment of nutritional status of individuals and population groups are studied. Assessment methodology includes dietary surveys, computerized dietary intake analysis, anthropometric measures, biochemical measures and clinical evaluations. Laboratory experiences are provided to allow students practice time for learning and applying assessment techniques. Pre-requisite: Permission of instructor. LEC
- DIET 817 Seminar in Dietetics and Nutrition (1). Seminar designed to promote effectiveness of professional written and oral communication, increase knowledge of research, and review content information in selected topics in dietetics. LEC
- DN 820 Nutrition Education Skills for School Teachers (3). This graduate level course will expand understanding of nutrition and healthy eating for classroom teachers and other professionals who work with children. The course has a special emphasis on child and adolescent nutrition and how to translate nutrition facts into classroom applications and school-based interventions. Course topics will include healthy food choices, nutrition guidelines, nutrients, energy balance and weight, child and adolescent nutrition, and nutrition education in the classroom, school-

**KU’s audiology program ranked seventh in the nation among public universities in the 2009 edition of U.S. News & World Report’s “America’s Best Graduate Schools.”**

**For SPLH courses, see the College of Liberal Arts and Sciences chapter of this catalog.**

The Dietetic Internship Graduate Certificate Program is fully accredited and includes graduate credit that can be applied to an M.S. degree.
DN 826 Nutrition Care Management (2-4). An intermediate level course in which students develop skills involving communication, education, and management related to dietetics and nutrition practice. Students may typically be enrolled in DN 827 Practicum associated with the Dietetic Internship. Consent of instructor is recommended without concurrent enrollment in DN 827. Prerequisite: Undergraduate course work in nutrition, dietetics, foods, biochemistry and physiology.LEC

DN 827 Practicum: Process in Clinical Dietetics (1-7). Supervised practice experience for graduate level students to fulfill the requirements for the Dietetic Internship. Experiences take place in hospitals, clinics, community health agencies, and other practice settings in which dietetics and nutrition services are provided. Prerequisite: Admission to the graduate program, permission of dietetic internship director or course instructor. LEC

DN 828 Ed D Integrate in Dietetics (2-3). A study of teaching methods appropriate for use in a clinical setting. Emphasis on development of instructional objectives, learning situations, and methods of evaluations to be used in clinical teaching in dietetics. Prerequisite: Consent of instructor. LEC

DN 829 Nutrition and Aging (2). An overview of nutrition and the aging process. Physiological, psychological, and sociological aspects of aging, theories of aging, internal and external factors related to nutrient intake, and nutrient needs will be considered. LEC

DN 830 Food Technology (2-3). Consideration of current food processing methods and the factors affecting the palatability and nutritive values of human foods. Course includes pertinent information regarding the protection of the food supply. LEC

DN 834 Methods of Research in Nutrition (3). A study of basic research terminology and designs commonly used in nutrition research. Topics include: research on animals, tissue culture and human subjects; qualitative, quantitative and outcomes research; ethical issues in research; dissemination of research findings; and appropriate use of research findings. Prerequisite: Consent of instructor. LEC

DN 838 Advanced Medical Nutrition Therapy (3). This course evaluates current issues in medical nutrition therapy. Content includes evidence based analysis, the role of diet in disease management including factors related to disease, pathology, nutritional assessment and medical nutrition management of specific disease states. Prerequisite: undergraduate medical nutrition therapy, biochemistry, physiology, or consent of the instructor. LEC


DN 840 Advanced Topics in Nutrition (1-2). Reading and preparation of a paper and/or oral presentation on a selected subject in nutrition. Prerequisite: Consent of instructor. LEC

DN 841 Public Health Nutrition (1-3). Introduction to public health nutrition concerns, assessment of nutritional status of populations, nutrition education and counseling of individuals and groups, and nutrition services in the community. Discussion of the roles of dietitians, nutritionists, and others in providing community nutrition services. Prerequisite: Consent of instructor. LEC

DN 854 Special Problems in Dietetics and Nutrition (1-4). Directed study of special problems in nutrition or nutrition care. This course provides for the individual or group study of special problems. Through directed readings, investigations, and projects, the student acquires information with reference to questions in dietetics and nutrition not covered in organized courses. LEC

DN 857 Motivational Interviewing in Public Health Settings (1). The course is designed to introduce participants to Motivational Interviewing, its concepts, and to the subsequent skills required for helping people to change. This course will be cross-listed with PRVM 857. LEC

DN 860 Collaboration Strategies in Health Care (1). Persuasion and negotiation techniques: skills to evaluate and promote collaboration and goal achievement in a multidisciplinary health care team; analysis of communication styles and strategies to achieve mutual beneficial outcomes. LEC

DIET 862 Maternal and Child Nutrition (3). Critical examination of behavioral, physiological, and public health issues impacting dietary and nutritional factors that support normal growth and development. Course content focuses on the early stages of the life cycle: gestation, lactation, infancy, preschool, school age, and adolescence. Topics include the fetal programming hypothesis, growth and nutritional requirements, breast and formula feeding of infants, infant weaning, and eating behaviors that lead to normal growth, growth faltering, and pediatric obesity. Cross-listed with DN 862. Prerequisite: Registered Dietitian, or registry eligible dietitian. LEC

DN 865 Nutrition in Sports and Exercise (3). Exercise physiology and nutrient requirements in sports and exercise: macronutrient, micronutrient and fluid needs of athletes engaged in specific sports, pre/post exercise meals, gender specific requirements, role of exercise in the management of chronic diseases. Prerequisite: Biochemistry and/or exercise physiology class or permission of the instructor. LEC

DN 870 Health Behavior Counseling (3). Theoretical and applied issues in health behavior counseling. Students will learn the theories of behavior change and how to apply these to health care issues. Specific health behaviors (i.e., dietary changes, smoking cessation, exercise adherence) will be discussed in the context of chronic diseases in children, adults, and the elderly. Effective methods of counseling patients and promoting changes on an individual and small group basis will be presented. LEC

DIET 875 Pediatric Clinical Nutrition (3). Examines physiological, biochemical and nutritional aspects of disease processes relevant to infants and children up to 18 years of age. Medical nutrition therapy for a variety of medical conditions found in this population will be discussed including inborn errors of metabolism, food hypersensitivity, obesity, and diseases of the major organ systems. Cross-listed with DN 875. Prerequisite: Registered Dietitian or registry eligible dietitian. LEC

DN 875 Pediatric Clinical Nutrition (3). Examines physiological, biochemical and nutritional aspects of disease processes relevant to infants and children up to 18 years of age. Medical nutrition therapy for a variety of medical conditions found in this population will be discussed including inborn errors of metabolism, food hypersensitivity, obesity, and diseases of the major organ systems. Prerequisite: DN 826: Applied Clinical Nutrition or equivalent or consent of instructor. LEC

DN 876 Intervention for the Prevention and Management of Obesity (3). This course emphasizes obesity in a population group ranging from childhood to the adult. Course materials will examine the impact of obese conditions on disease development throughout the life cycle. The course will critically analyze current evidence focused on interventions used in the behavioral and clinical management of overweight and obese individuals in community and clinical settings. Prerequisites: Consent of instructor. LEC

DN 880 Dietary and Herbal Supplements (1-2). Designed to develop the health professional's skills in partnering with patients to make dietary supplement decisions. Students will investigate the use of botanicals and dietary supplements in nutritional support of aging, maternal health, and wellness. Discussions on supplementation in the prevention and treatment of chronic disease will include: arthritis, cancer, cardiovascular disease, diabetes, digestive, liver and renal disorders, memory deficits, and ophthalmic dysfunctions. Prerequisite: Undergraduate degree. Completion of a course in human physiology is advisable. Lectures, journal readings, web enhanced course work and self study of recommended resources on dietary and herbal supplements are educational methods used in this course. To be eligible for 2 hours credit the student will also complete an investi...
The Master of Science in Nurse Anesthesia prepares the registered nurse to become a Certified Registered Nurse Anesthetist (CRNA). It is a comprehensive 36-month program that provides students with the most up-to-date knowledge and skills required for success in nurse anesthesia practice. Graduates are able to function independently or in a group practice setting.

The program draws on the extraordinary academic and clinical resources of the KU Medical Center and outstanding clinical affiliate sites to enhance the student’s learning opportunities in all anesthesia techniques. Students have experiences in neurosurgery, orthopedics, urology, ophthalmology, burns, pediatric, regional anesthesia, obstetrics/gynecology, cardiothoracic surgery, otolaryngology, general surgery, outpatient surgery, radiologic procedures, critical care, trauma, and emergency surgery. The program offers the curriculum in an innovative contemporary education model. The first year consists of basic sciences and the foundations of anesthesia practice with a phased introduction to clinical practice. The second and third years provide extensive clinical practice while continuing didactic education through Web-based classes and research.

The application deadline is July 15 each year, and new students begin the program in the summer semester. Upon graduation, students receive an M.S. degree in nurse anesthesia and are eligible for certification from the Council on Certification of Nurse Anesthetists. The program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs, the Kansas State Board of Nursing, and the North Central Accrediting Association.

Admission

Applicants must meet the admission requirements set by the American Association of Nurse Anesthetists’ Councils on Accreditation and Certification, the Department of Nurse Anesthesia Education, and KU. In full support of university policies, the nurse anesthesia program seeks a culturally diverse student body and does not discriminate against any group protected by law.

Departmental admission requirements:
1. The applicant must hold a license as a professional Registered Nurse (R.N.) in Kansas and Missouri, or be eligible for licensure in those states.
2. The applicant must hold a bachelor’s degree in an appropriate discipline.
3. The applicant must have at least two years of experience as a registered professional nurse with a minimum of one year of recent, full-time experience in intensive care.
4. The following courses or their equivalents must be eligible for transfer to KU as college/university credit. All courses required for admission must have been completed with a minimum grade of C and cannot be credit by examination. A Pass grade is not accepted unless the applicant provides written verification from the university that the Pass designation is equivalent to a grade of C or higher.

Statistics: One course with both parametric and nonparametric content. Basic Sciences: The following five science classes are required; an overall grade-point average of 3.0 on a 4.0 scale is required in these courses:
- Chemistry (two courses that covered the topics of inorganic, organic, and biochemistry)
- Microbiology (one course)
- Anatomy* (one course)
- Physiology* (one course completed within 10 years of program start date with a minimum grade of B)

*In lieu of separate anatomy and physiology courses, two semesters of a combined Anatomy/Physiology course are acceptable (a minimum grade of B must be attained in both courses, and both must be taken within the last 10 years).
5. The applicant must have achieved an overall grade-point average of 3.0 on a 4.0 scale in all cumulative college work.
6. The applicant must have writing skills appropriate to graduate-level education.
7. The applicant must provide three recommendations from individuals who can accurately evaluate his or her clinical skills, experience, and ability to pursue graduate study. One reference is required from the applicant’s supervisor/nurse manager, one from an advanced practice nurse/M.D. (anesthesia provider preferred), and one from a former/current instructor or peer/co-worker.
8. The applicant must submit a one-page, typed statement outlining her or his educational and professional goals.
9. Once all application materials have been received, applicants meeting the above criteria are invited to attend a personal interview.

DN 890 Graduate Research (1-4). Individual investigation of special problems in areas of research. Prerequisite: Consent of instructor LEC

DN 899 Thesis (1-6). Scholarly essay based on research, written under the guidance of the student’s adviser. Credit given upon meeting thesis requirements for the master’s degree. Prerequisite: Consent of adviser. THE
interview. Only applicants who attend the personal interview are considered for admission.

10. Before matriculation, all admitted students must
   • Complete ACLS and PALS and keep them current throughout the pro-
     gram for student’s personal safety and that of their patients.
   • Submit to a background check at the student’s expense.

Critical Care Registered Nurse (CCRN) certification is strongly
couraged.

Because of the unique design and content of the curriculum, the
program does not accept transfer students.

Degree Requirements

In addition to departmental requirements, the applicant must
meet KU general requirements and the requirements of the
Council on Accreditation of Nurse Anesthesia Educational
Programs, as well as the Council on Certification of Nurse
Anesthesiologist’s requirements for eligibility to write the certification
examination. Department requirements include satisfactory
completion of admission and curriculum requirements, a written
comprehensive examination, a capstone project, and supervised
clinical practicum.

Program curriculum requirements:

Chemistry/Physics ................................................. 3
Clinical Anatomy .................................................. 4
Pharmacology ...................................................... 6
Advanced Physiology ............................................ 3
Advanced Pathophysiology ................................. 3
Basic Principles of Anaesthesia ............................ 3
Introduction to Clinical Practicum ......................... 3
Foundations of Anaesthesia Practice ................. 3
Assessment and Monitoring in Anaesthesia ....... 3
Regional Anaesthesia/Pain Management ............ 2
Advanced Theory/Practice I-VI ......................... 32
Professionalism: Aspects .................................... 3
Introduction to Theory and Research ................. 2
Health Care Research .......................................... 4
Thesis/Capstone Project .................................... 6

**Nurse Anesthesia Courses**

**NURA 800 Professional Aspects of Anaesthesia** (3). This course includes orientation
and introduction to the professional role of nurse anesthetist. The student will gain an understanding of the
anesthesia department and the anesthetist. The history of anesthetics will be examined. The practice of
anesthesia will be discussed. Ethical, psychological, professional adjustments and legal
responsibilities of the nurse anesthetist will be examined. LEC 3

**NURA 801 Introduction to Clinical Practicum** (2). Students will engage in clinical
practice that involves introduction to basic anesthesia skills. Emphasis is given to
patient assessment, anesthesia planning and management of the patient popula-
tion of low risk categories. The course includes introduction to clinical problem solving and "call" experiences that address the trauma patient and emergency
surgical/anesthetic interventions for pathological states. Prerequisite: Permission of Instructor. LEC 2

**NURA 805 Clinical Anatomy** (4). An intensive study of the major anatomical sys-
tems and regions of the body which have clinical significance for anesthetists and
others. Particular attention is devoted to the respiratory, cardiovascular, and nervous
systems. Regional topics include the anatomy of the head, neck, vertebral column, thorax, axilla, and femoral triangle. Involves both lectures and cadaver dissection,
plus appropriate models, x-ray films, and audiovisual materials. Prerequisite: Admission to the Nurse Anesthesia Program or permission of instructor. LEC 4

**NURA 806 Advanced Physiology** (4). A course designed to lead to an advanced
comprehension of the physiology of organ systems in the human in both cellular and
organ processes. Physiology subject matter relevant to clinical health sciences include
membrane transport, muscle, cardiovascular, respiratory, renal, water and electrolyte
balance, gastrointestinal, and endocrine physiology as well as neurophysiology. Cel-
lar mechanisms include the structure and function of ion channels and pumps, mechan-
isms of calcium regulation, excitation-coupling processes and mechanisms of
oxidative cell damage and apoptosis. Prerequisite: Permission of instructor. LEC 4

**NURA 807 Advanced Pathophysiology** (3). This course is an analysis of complex
interrelationships and interdependence of organ systems in health and disease.
The focus will be on the central concepts of pathophysiology of the cellular, tissue,
and system levels. Selected content relating to pulmonary, cardiovascular, renal
gastrointestinal, endocrine, and immunologic, and endocrine systems is included.
Prerequisite: Permission of the instructor. LEC 3

**NURA 810 Foundations of Anaesthesia Practice** (2). The course introduces the stu-
dent to the basic foundations of nurse anesthesia. Principles of anesthesia are integrated
with the theories and concepts relative to the art and science of prac-
tice. The fundamentals of didactic knowledge as applied to the clinical environ-
ment are addressed. The course is designed to provide students with the basic un-
derstanding of pathological states that require them to engage in critical thinking to
provide safe anesthesia care. Prerequisite: Permission of Instructor. Corequisite: NURA 801. LEC

**NURA 811 Advanced Theory in Anaesthesia I** (2). This is the first of six courses rela-
tive to the didactic study of the art and science of nurse anaesthesiology. Students will
acquire the knowledge base pertinent to the perioperative anesthetic manage-
ment of obstetrical and pediatric patients. Students will participate in case scenarios and
threaded discussions via the Internet to enhance their critical thinking, problem-
solving skills, and ability to synthesize didactic information to the clinical environ-
ment. Online threaded discussions will be provided, allowing interaction between
students, and between students and the instructor in addition, students will be re-
quired to engage in analysis of currently published research to identify "best prac-
tices" based on research evidence. Prerequisite: Permission of Instructor. LEC 2

**NURA 812 Advanced Theory in Anaesthesia II** (3). This is the second of six courses relative to the study of the art and science of nurse anaesthesiology. Students will
acquire the knowledge base pertinent to the management of orthopedic procedures along with the fluid and electrolyte needs of patients
during surgical interventions. Students will participate in case scenarios and
threaded discussions via the Internet to enhance their critical thinking, problem-
solving skills, and ability to synthesize didactic information to the clinical environ-
ment. Online threaded discussions will be provided, allowing interaction between
students, and between students and the instructor in addition, students will be re-
quired to engage in analysis of currently published research to identify "best prac-
tices" based on research evidence. Prerequisite: Permission of Instructor. LEC 3

**NURA 813 Advanced Theory in Anaesthesia III** (3). This is the third of six courses relative to the study of the art and science of nurse anaesthesiology. Students will
acquire the knowledge base pertinent to the perioperative anesthetic management of
obstetrical and pediatric patients. Students will participate in case scenarios and
threaded discussions via the Internet to enhance their critical thinking, problem-
solving skills, and ability to synthesize didactic information to the clinical environ-
ment. Online threaded discussions will be provided, allowing interaction between
students, and between students and the instructor in addition, students will be re-
quired to engage in analysis of currently published research to identify "best prac-
tices" based on research evidence. Prerequisite: Permission of Instructor. LEC 3

**NURA 814 Advanced Theory in Anaesthesia IV** (2). This is the fourth of six courses relative to the study of the art and science of nurse anaesthesiology. Students will
acquire the knowledge base pertinent to the perioperative anesthetic management of
obstetrical and pediatric patients. Students will participate in case scenarios and
threaded discussions via the Internet to enhance their critical thinking, problem-solving skills, and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between
students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best prac-
tices" based on research evidence. Prerequisite: Permission of Instructor. LEC 2

**NURA 815 Advanced Theory in Anaesthesia V** (3). This is the fifth of six courses relative to the study of the art and science of nurse anaesthesiology. Students will
acquire the knowledge base pertinent to the perioperative anesthetic management of
obstetrical and pediatric patients. Students will participate in case scenarios and
threaded discussions via the Internet to enhance their critical thinking, problem-solving skills, and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between
students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify "best prac-
tices" based on research evidence. Prerequisite: Permission of Instructor. LEC 3

**NURA 821 Advanced Practicum in Anaesthesia I** (2). This is the first of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 822 Advanced Practicum in Anaesthesia II** (3). This is the second of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 823 Advanced Practicum in Anaesthesia III** (3). This is the third of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 824 Advanced Practicum in Anaesthesia IV** (2). This is the fourth of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 825 Advanced Practicum in Anaesthesia V** (3). This is the fifth of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 826 Advanced Practicum in Anaesthesia VI** (3). This is the sixth of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 827 Advanced Practicum in Anaesthesia VII** (3). This is the seventh of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

**NURA 828 Advanced Practicum in Anaesthesia VIII** (3). This is the eighth of six courses relative to the application of the art and science of nurse anaesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA
NURA 824 Advanced Practicum in Anesthesia IV (2). This is the fourth of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of skills. Students will demonstrate progression in cognitive, psychomotor, and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

NURA 825 Advanced Practicum in Anesthesia V (3). This is the fifth of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression to cognitive, psychomotor, and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. PRA

NURA 826 Advanced Practicum in Anesthesia VI (3). This is the sixth of six courses relative to the application of the art and science of nurse anesthesiology. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of Instructor. CKN

NURA 831 Chemistry and Physics of Anesthesia (3). Chemical and physical principles involved in anesthesia including states and properties of matter, laws governing the behavior of gases, flow and vaporization, oxidation and combustion; principles of electricity and electrical safety; chemical properties and structure-activity relationships for anesthetic accessory and therapeutic drugs. Course will also cover pertinent areas of biochemistry relative to anesthesia practice. Prerequisite: Permission of instructor. LEC

NURA 832 Basic Principles of Anesthesia Practice (3). This course introduces students to the introductory principles and theories regarding the art and science of anesthesia practice. Students will develop a conceptual basis for practice gained through a systems approach applied to development of anesthesia care based upon a strong foundation in physical assessment, physiological monitoring, applications of pharmacology, anesthesia systems, physical and chemical basic sciences. Prerequisite: Admission to the nurse anesthesia program or permission of instructor. LEC

NURA 834 Advanced Assessment and Monitoring in Anesthesia and Acute Care (3). Systematic assessment of patients. Principles of monitoring in the evaluation and perioperative care of patients. Emphasis will be on the cardiovascular, pulmonary, endocrine, and neurologic systems and their relation to the assessment and monitoring of patients in the anesthesia setting. Prerequisite: Permission of instructor. LEC

NURA 839 Regional Anesthesia/Pain Management (2). Includes study of conductive anesthesia techniques, pharmacokinetics of local anesthetics, anatomical placement, and physiologic response. The course is inclusive of acute and chronic pain management techniques. LEC

NURA 880 Advanced Topics: (1-4). Special study allowing a student to pursue a particular subject through readings, directed assignments, and conferences with a faculty member. Prerequisite: Consent of instructor. LEC

NURA 890 Graduate Research (1-3). Research leading to the submission of a master’s thesis. Students will develop the project for the Master of Science in Nurse Anesthesiology. Independent scientific investigation in nurse anesthesia. Must be approved by and under the supervision of the student’s research adviser. In partial fulfillment of the requirements for the degree. Prerequisite: Consent of adviser. LEC

NURA 891 Introduction to Theory and Research Methods (2). The course will provide a broad overview of nursing theory and research methodologies. Students will examine the scientific and philosophical underpinnings of nurse anesthesia practice. Theories are discussed relative to their influence on the practice and research of nursing and nurse anesthesia. Students will explore the parameters of concept analysis, theory development, and theory evaluation. The student will gain an understanding of how to develop research questions including study design and factors to be considered in initiating a research project. Clinical scholarship and the development of critical thinking in anesthesia will be reviewed. Prerequisite: Permission of Instructor. LEC

NURA 896 Capstone Project (1-3). The capstone project is the culmination of the master’s degree course of study. The project requires a practice-focused problem to be identified and examined in depth. The student will include application of an intervention suitable to their area of focus and dissemination of the project findings to a targeted audience is expected. Prerequisite: Permission of the instructor ISW

NURA 899 Thesis (1-3). Restricted to the writing, preparation of the formal thesis, based upon independent research and in partial fulfillment of the requirements for the Master of Science in Nurse Anesthesiology. Thesis must be defended prior to degree completion. Prerequisite: Consent of adviser and NURA 890. THÉ

Occupational Therapy
Chair: Winifred W. Dunn
Graduate Adviser: Jeff Radel
KU Medical Center, 3033 Robinson Hall, Mail Stop 2003
3901 Rainbow Blvd., Kansas City, KS 66160
www.ot.kumc.edu, (913) 588-7195
Professors: Dunn, McDowd
Associate Professor: Radel
Assistant Professors: Ahmad, Kabel, Mische-Lawson, Morrison, Sabata

Master of Occupational Therapy
www.ot.kumc.edu

The Master of Occupational Therapy (M.O.T.) is an entry-level professional degree for individuals who wish to become occupational therapists. Occupational therapists use occupation (i.e., purposeful activity that is meaningful to the person and aimed at achieving a goal) to support people to develop or regain skills they need to learn, play, earn a living, and take care of themselves and others. The occupational therapist provides services to persons of all ages who want and need to participate as active members of society, but for whom physical, developmental, cognitive, or emotional issues interfere. Occupational therapists also provide services to well populations, communities, and individuals to facilitate maximum health and quality of life and to prevent injury and disability. Occupational therapy maximizes the quality of life for the individual, the family, and caregivers and keeps health care costs down. Occupational therapists are employed in schools, mental health facilities, hospitals, rehabilitation centers, home health agencies, government and community agencies, private practices, and industry. They may provide direct intervention services; act as consultants, administrators, and researchers; teach at a college or university; or any combination of these. To acquaint students with the OT profession, an introductory course (OCTH 101) is offered on KU’s Lawrence campus. This course is open to all students.

The entry-level Master of Occupational Therapy program is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association, 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220, (301) 652-AOTA. Graduates of the M.O.T. program may sit for the national certification examination for occupational therapists administered by the National Board for Certification in Occupational Therapy. After completion of this examination, the individual is an Occupational Therapist, Registered. Most states require licensure to practice. Initial state licensure is based on the successful completion of the NBCOT certification examination.

Admission. Students are eligible for admission after completing a minimum of 90 credit hours of preparatory course work, which may be taken on the Lawrence campus or at another university; up to 64 hours can be taken at a community college. Students must earn a minimum grade-point average of 3.0 on a 4.0 scale in prerequisites. Contact the OT education program of-
Occupational Therapy

At KU Medical Center for information on other eligibility requirements and for current information.

Eligible students should begin the application process by submitting the School of Allied Health application and fee before December 31. Complete the application process by submitting other application forms (available from the OT office or online) and one official college transcript between July 1 and December 31. Application procedures are subject to change. Check the OT Education Web site or contact the department directly for updates.

The occupational therapy admission committee reviews applications. Selection is based on the applicant’s strength in meeting all eligibility criteria. If selected for admission, the student begins the three-year program the following summer at KU Medical Center. Contact the department or visit our Web site for application materials and further information about the process.

International students or those for whom English is a second language must meet minimum English Proficiency Requirements. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information. International students may have additional requirements for visa, residency, and citizenship status. Students should contact the KUMC Office of International Programs for guidance regarding these issues during the application process.

All prospective students are encouraged to obtain advising from the OT education department at KU Medical Center or to schedule an appointment through the University Advising Center on the Lawrence campus.

Curriculum. The Master of Occupational Therapy is a three-year, full-time program starting each summer session. During the first year, students enroll in undergraduate courses focusing on occupational studies. Students who complete these courses earn a B.S. in Occupational Studies. During the second and third years, students take graduate-level courses that lead to the M.O.T. Completion of both levels allows the individual to sit for the national certification examination. Courses include basic science, occupational therapy theory and application, clinical reasoning, and practice. The student must complete a research project with a group of students and a faculty mentor. Students must complete:

- 90 credit hours of prerequisite course work.
- 39 hours of undergraduate academic courses and part-time practice in the occupational therapy department.
- 44-51 graduate hours in occupational therapy courses and fieldwork. The academic portion of the program is punctuated with full time Level II Fieldwork experiences, giving students ample opportunity to integrate practical experience with classroom learning.
- 12 hours of Level II Fieldwork.

Level II Fieldwork. FW II is a vital part of an occupational therapy education and a degree requirement. FW II courses are full-time practicum experiences carried out in service delivery settings. Students take FW II during the Spring 2a and Fall 3 semesters. An optional FW II experience may be scheduled during the Summer semester. Each student must be prepared to complete at least one FW II experience in Kansas but outside the greater Kansas City area (as defined by the OT education department). FW II may only be scheduled and arranged through the academic fieldwork coordinator or the fieldwork assistant. Students are responsible for transportation to and from fieldwork centers, living arrangements and expenses, tuition and fees for 12 to 18 credit hours, and any other expenses.

Typical Course Sequence. Both undergraduate and graduate courses for the entry-level M.O.T. degree are outlined below.

### Summer 1
- 9 credit hours
  - OCTH 388 Human Anatomy
  - OCTH 395 Orientation to the Occupational Therapy Profession
- 16 credit hours
  - OCTH 401 Theory and Practice in Occupational Therapy
  - OCTH 415 Communication and Professional Relations

### Fall 1
- 16 credit hours
  - OCTH 422 Analysis and Adaptation of Occupations I
  - OCTH 430 Practicum I
  - OCTH 435 Life Span Development from an Occupational Perspective
  - OCTH 455 Neuroscience Analysis of Occupational Performance

### Spring 1
- 14 credit hours
  - OCTH 445 Contexts of Occupations
  - OCTH 462 Physical Considerations in Facilitating Occupational Performance
  - OCTH 468 Practitioner Physical Performance Lab
  - OCTH 470 Practicum II
  - OCTH 472 Psychiatric Considerations in Facilitating Occupational Performance
  - OCTH 482 Analysis and Adaptation of Occupations II
  - OCTH 490 Evaluation and Assessment of Occupational Performance

### Fall 2
- 14 credit hours
  - OCTH 704 Planning and Intervention in Occupational Therapy
  - OCTH 710 Service Management: Delivery Systems
  - OCTH 720 Occupational Therapy Practice Models
  - OCTH 730 Practicum III
  - OCTH 783 Evidence-Based Practice

### Spring 2a
- 6 credit hours
  - OCTH 770 Level II Fieldwork (instructor permission required)

### Spring 2b
- 6 credit hours
  - OCTH 775 Issues and Trends Seminar

### Summer
- 3-6 credit hours
  - OCTH 780 Elective Level II Fieldwork (instructor permission required)

### Fall 3
- 8 credit hours
  - OCTH 776 Family and Community Service Systems

### Spring 3
- 9 credit hours
  - OCTH 777 Level II Fieldwork, Part 2
  - OCTH 780 Elective Level II Fieldwork (instructor permission required)

### Master of Occupational Therapy Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 680</td>
<td>Independent Study</td>
<td>1-6</td>
</tr>
<tr>
<td>OCTH 704</td>
<td>Planning and Intervention in Occupational Therapy</td>
<td></td>
</tr>
<tr>
<td>OCTH 710</td>
<td>Service Management: Delivery Systems</td>
<td></td>
</tr>
<tr>
<td>OCTH 720</td>
<td>Occupational Therapy Practice Models</td>
<td></td>
</tr>
<tr>
<td>OCTH 725</td>
<td>Supervision, Team Relations, and Management Communication</td>
<td></td>
</tr>
<tr>
<td>OCTH 730</td>
<td>Practicum III</td>
<td></td>
</tr>
<tr>
<td>OCTH 740</td>
<td>Special Topics in Practice</td>
<td></td>
</tr>
<tr>
<td>OCTH 750</td>
<td>Case-Based Clinical Reasoning</td>
<td></td>
</tr>
<tr>
<td>OCTH 765</td>
<td>Family and Community Service Systems</td>
<td></td>
</tr>
<tr>
<td>OCTH 766</td>
<td>Issues and Trends Seminar</td>
<td></td>
</tr>
<tr>
<td>OCTH 767</td>
<td>Research Practicum</td>
<td></td>
</tr>
</tbody>
</table>

THE UNIVERSITY OF KANSAS 2009-2011

50

50

50

50
OCTH 755 Issues and Trends Seminar (1). Students will analyze key professional, political, and cultural issues and trends that impact service provision and the populations served by occupational therapists. LEC

OCTH 760 Professional Development and Leadership in Service Management (3). Exploration of professional responsibilities, professional career development opportunities, and preparations for employment. Service management content will build on previous service management courses, and will develop an understanding of leadership, administration, and management of occupational therapy services. LEC

OCTH 765 Family and Community Service Systems (2). Through lecture and seminar groups, student will use clinical reasoning to examine various systems that impact service delivery. Students will complete a program evaluation project based on their experiences during their level II fieldwork. LEC

OCTH 770 Level II Fieldwork, Part 1 (6). A required full-time, three-month supervised experience in a facility meeting specified criteria. Qualified occupational therapists will supervise the experience. Students will be exposed to a variety of age ranges and disabilities within different service delivery systems. Prerequisite: Satisfactory completion of required academic course work. LEC

OCTH 775 Level II Fieldwork, Part 2 (6). A required full-time, three-month supervised experience in a facility meeting specified criteria. Qualified occupational therapists will supervise this experience. Students will be exposed to a variety of age ranges and disabilities within different service delivery systems. Ages, disabilities, and service provision systems for this course will differ from the student's prior fieldwork experience. Prerequisite: Satisfactory completion of required academic course work. LEC

OCTH 776 Population-Based Health Care (2). Concepts and theories related to providing health care to complex systems and aggregates in the community, state, nation and world are explored. Emphasis is placed on the promotion, maintenance and restoration of health and wellness and the prevention of disease. Internal and external environmental components which include historical, political, social, cultural and economic factors are presented. The role of the health care provider in identifying, prioritizing and meeting the health and life participation needs of aggregates is discussed. LEC

OCTH 780 Elective Level II Fieldwork (3-6). An elective (optional) supervised experience in a facility meeting specific criteria. Qualified occupational therapist will supervise this experience. This fieldwork would allow students to pursue areas of special interest. Length and time commitment of experience will be commensurate with credit hours (e.g. each credit requires 80 hours of fieldwork contact at specified site). Prerequisite: Satisfactory completion of required academic course work and OCTH 770. LEC

OCTH 783 Evidence-Based Practice (2). This course will address the parameters and criteria for evidence-based practice. Students will evaluate the status, beliefs, and practice of the profession, and will develop skills at synthesizing and presenting evidence to service recipients. Students will also formulate a decision-making paradigm for their future practice decisions. LEC

OCTH 790 Research Practicum (3). Students in this course will carry out a research project with the guidance of a faculty mentor, and write a research paper reporting the results of their study. Students will achieve competency in scientific writing and use of the American Psychological Association (APA) style. Prerequisite: OCTH 727. Students from programs outside the M.S. in Occupational Therapy or Ph.D. in Therapeutic Science need to contact the Occupational Therapy Department for permission to enroll. LEC

Post-Professional Doctor of Occupational Therapy

www.ot.kumc.edu

The O.T.D. is an advanced-practice degree for occupational therapists wishing to upgrade their knowledge and skills to meet the increasing demands of complex practice issues. The O.T.D. focuses on specialization and professional leadership in practice. The program is flexible to meet the needs of the practicing therapist. The curriculum is based on four key components: evidence-based practice, professional leadership, advanced practice, and teaching. The student identifies an area of focus related to leadership (e.g., public policy, administration), advanced practice (e.g., gerontology, low vision), and teaching (e.g., college, client/patient, continuing education).

Admission. Applicants must meet general admission requirements for graduate studies at KU. Additional departmental requirements for admission to the O.T.D. program include the following:

1. Degree from an accredited entry-level occupational therapy program (college transcripts must be provided).
2. Master’s degree in occupational therapy (M.S. in OT or M.O.T.) or a related field (college transcripts must be provided). Students with bachelor’s degrees may apply but will be required to take prerequisite master’s-level course work before beginning the O.T.D. program.
3. The applicant must be certified through NBCOT. The applicant must currently be practicing as an occupational therapist or have past experience as a practicing occupational therapist (curriculum vitae and proof of certification as an OT must be provided).
4. Three letters of recommendation (one must be from a work supervisor).
5. A brief statement of career goals (200 to 400 words).
6. Application materials must be submitted by June 1 for fall admission, November 1 for spring admission, and April 1 for summer admission.

International students or those for whom English is a second language must meet minimum English Proficiency Requirements. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information. International students may have additional requirements for visa, residency, and citizenship status. Students should contact the KUMC Office of International Programs for guidance regarding these issues during the application process.

Curriculum. The student must complete the core and elective course work with an overall grade-point average of 3.0 or higher on a 4.0 scale. The student must complete 36 credit hours including course work and a focused capstone project. The capstone is an individually designed, mentored project that demonstrates a synthesis of the knowledge and skills developed in the program. Upon completion of the O.T.D., students are prepared for careers in education, advanced practice, or professional leadership and administration.

Core Curriculum. A minimum of 36 credit hours is required. The core curriculum or the individual student’s plan may change to include additional course work.

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence-based practice (2 courses)</td>
<td>6</td>
</tr>
<tr>
<td>Professional leadership (3 courses)</td>
<td>9</td>
</tr>
<tr>
<td>Specialty practice (5 courses)</td>
<td>15</td>
</tr>
<tr>
<td>Teaching practicum (1 course)</td>
<td>3</td>
</tr>
<tr>
<td>General elective (1 course)</td>
<td>3</td>
</tr>
</tbody>
</table>

Doctor of Occupational Therapy Courses

OTD 750 Clinical Reasoning and Problem Based Learning (3). Students will apply a clinical reasoning process to individuals with occupational performance needs. Cases will be presented from students’ clinical experiences. In a problem solving format, students will evaluate models of service delivery, evaluation and intervention delivery and dissemination of information received by the individual. Students will identify and discuss alternatives given a variety of situations and environments. Prerequisite: Permission of Department. LEC

OTD 770 Knowledge for Specialty Practice Area (3). This course is designed to support and correspond with OTD 780. Students will be matched with a faculty mentor as they develop a literature review in an area of clinical interest. This experience is designed to supplement students’ ongoing clinical practice as they develop a library of pertinent empirical readings. Students will be mentored as they develop skills in analytical reading and identification of information that informs best practice. Prerequisite: Admission to O.T.D. Program or permission of instructor. LEC

OTD 776 Population-Based Health Care (3). This course will coordinate with OCTH 776. The purpose of this course is to introduce concepts and theories related to providing health care to complex systems and aggregates in the community, state and nation. Emphasis is placed on the promotion, maintenance and
OTD 780 Practicum in Specialty Practice Area (3). This course is designed to support and correspond with OTD 770. Students will complete this course as they work in a clinical environment. They will meet with a faculty mentor to support the analysis and dissemination of their empirical information gathered during OTD 770. They will present their empirical findings to their professional colleagues via a clinical research forum. Students will be expected to create three forms of information dissemination and critically review the professional feedback they receive. Prerequisite: Permission of department. LEC

OTD 783 Evidence-Based Practice (3). This course will coordinate with OTCH 783. Students will address the parameters and criteria for evidence-based practice. They will build a library of information that facilitates their evaluation of the status, beliefs, and practice of Occupational Therapy. They will develop skill in the synthesis of empirical evidence and explore dissemination options to service recipients. Students’ work will culminate in the formulation of a decision-making paradigm for their future practice decisions. Prerequisite: Permission of Department. LEC

OTD 799 Practice and Research (3). This is an elective course that allows students to pursue areas of special interest under the guidance of a faculty member of his or her choice. This course is designed to support students’ learning as they complete their pre-doctoral studies. Investigation of special issues relevant to an aspect of occupational therapy practice will include study of pertinent practice factors. Students will complete special projects relevant to the practice areas of interest, such as an oral presentation, written paper, or case analysis. May be repeated for credit. Prerequisite: Permission of Department. LEC

OTD 825 Qualitative Research Methods (3). This course is an introduction to qualitative research techniques. Students will have several opportunities to gain hands-on experience using fundamental qualitative research techniques to sharpen their data collection, analysis and write-up skills. The goals of this course are to better understand the role qualitative techniques play in research, identify various ethical issues, sharpen interview and observation skills, and develop foundation skills for collecting, analyzing and interpreting qualitative data. Prerequisite: Permission of Department. Lecture course. LEC

OTD 835 Quantitative Research for Applied Science (3). Research relevant to therapeutic intervention comes from a variety of disciplines involving varied research designs and analysis strategies. Students in this course will examine selected research studies and gain skill in analyzing methods and results as well as in applying research findings to practical problems. Students will conduct a systematic review on a specific area of occupational therapy practice. LEC

OTD 850 Teaching Practicum (3). The purpose of this course is to provide practical learning whereby students receive individual mentorship for the development, implementation and evaluation of a teaching experience. Students will be responsible for developing the material, instructing students, grading assignments and evaluating the teaching experience. The teaching experience is expected to include at least 12 hours of on-site face-to-face instruction, the equivalent in online teaching or written materials. Teaching experiences can include M.O.T. program lectures or labs, continuing education workshops, patient education programs, or staff in-services or another experience that meets the time and competency requirements. Prerequisite: A graduate teaching methods course such as NRSG 873, NRSG 874, C&T 740, C&T 840 PRA

OTD 860 Theory and Practice in Occupational Therapy (3). This course will cover major theoretical frameworks and practice models in occupational therapy. The history of occupational therapy will be considered as a basis for understanding the evolution of the profession as well as past and current issues and trends. Students will learn how to critically analyze theories, evaluate research evidence related to specific theories and practice models, and assess pragmatic issues in applying practice models to specific settings and populations. LEC

OTD 865 Theory-Based Practice (3). This course is designed to critically review Occupational Therapy theories, research, practice models and frameworks using the tenets of occupation based practice. Students will analyze seminal literature from occupational science and relate theory and evidence to practice. Students will review their specified area of practice to develop a proposed method of practice that incorporates empirical evidence and practice methods. Finally, students will select a mentor from their practice area to review their proposed critical feedback will be incorporated into a final presentation and paper. Prerequisite: Permission of department. LEC

OTD 875 Professional Development (3). This course will explore professional development from an advanced practice perspective. Students will explore the effects of advanced practice such as leadership (both work and professional), management, group and system communication and change agency. They will explore the topics within their current practice settings and select an area of advanced skills to explore in more depth. Students will develop an understanding of how they can impact systems and contribute to the development of the occupational therapy profession. LEC

OTD 880 Program Evaluation (3). Leadership in areas of specialty practice will require our graduates to critically evaluate their practice programs. In this course, students will explore the traditional and innovative ways to evaluate professional services and systems, and they will develop skills to conduct program evaluations. Students will examine the purpose and process of program evaluations in a variety of clinical settings. Through lecture, discussion and a project they will develop and execute a program evaluation in their area of practice. Prerequisite: Permission of Department. LEC

OTD 885 Advanced Practicum (3). This practicum is designed to span 400 hours. Students will identify an area of practice through which they want to develop clinical initiatives and leadership. Selected field experiences will provide opportunities for program development, leadership, and information dissemination. Upon completion, the students will provide his or her clinical team with a program, or research based initiative, along with specified program evaluation methods. Prerequisite: Permission of Department and continuous enrollment until completion of competencies. LAB

OTD 890 Capstone Project (3). The capstone project will comprise a written report that involves both literature and field research activity. A capstone project report represents the application of knowledge as well as the search for it, and differs from a thesis such that student opinion and experience is involved. The student must negotiate capstone objectives, evaluation standards and any potential approvals prior to his or her practicum. Prerequisite: Permission of Department and continuous enrollment until competencies totaling 6 credit hours are completed. IND

OTD 899 Special Projects (3). This is an elective course that allows students to pursue areas of special interest under the direction of a doctoral faculty member of his or her choice. This course is designed to support doctoral training. Academic options range from research based studies and/or activities to critical analysis of clinical practice methods. Students will complete special projects relevant to their designated practice area of interest. Students must negotiate learning objectives, academic projects and evaluation standards with their mentor. May be repeated for credit. Prerequisite: Permission of department. LEC RSH

Master of Science in Occupational Therapy

This program is for practicing occupational therapists and other professionals interested in researching disability issues. Admission is limited to students wishing to pursue a research-based master’s degree or to those interested in the Therapeutic Science doctoral program who do not hold a master’s degree with a research emphasis. This degree is not suited for individuals who wish to develop competence in clinical practice. The curriculum recognizes the importance of interdisciplinary dialogue in the development of research, teaching, and administrative skills and knowledge of relevant theory. Most course work is offered in the evenings.

Admission. Potential applicants should speak with the department to determine their suitability for this program and to obtain application materials. Applicants must meet general entrance requirements for graduate studies at KU. Additional departmental requirements for admission include the following:
1. The applicant must have a bachelor’s degree.
2. Three letters of recommendation are required.
3. The applicant must submit a brief statement of career goals and research interests (100 to 300 words).
4. Preference is given to applicants who can document a history of professional leadership.
5. Application materials must be received by April 1 for fall admission.

International students or those for whom English is a second language must meet minimum English Proficiency Requirements. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information.

The Master of Science degree in Occupational Therapy is for professionals interested in researching disability issues.

The Therapeutic Science doctoral program is for students whose interests in disability and quality of life require an integrated, interdisciplinary course of study.
International students may have additional requirements for visa, residency, and citizenship status. Students should contact the KUMC Office of International Programs for guidance regarding these issues during the application process.

Curriculum. The student must complete a minimum of 9 hours of core course work related to theory and disability issues, a 3-hour graduate neuroscience course, 12 hours of research courses (including thesis hours), and 12 elective hours, with an overall grade-point average of 3.0 or higher on a 4.0 scale. The student must pass a final oral examination that includes defense of the thesis.

Core Courses Offered in the M.S. in Occupational Therapy Program

OTMS 701 Professional Development .............................................. 3
OTMS 735 Practice Models for Applied Science ............................... 3
OTMS 801 Applied Neuroscience .................................................. 3
OTMS 835 Interpreting Research for Applied Science ....................... 3
OTMS 799 Special Topics in Occupational Therapy
(requires consent of faculty member) ............................................ 1-6
OTMS 890 Graduate Research (requires consent of faculty member) ..... 1-6
OTMS 899 Thesis (requires consent of faculty member) ..................... 1-6

Elective Options. Each student selects at least one 1-credit-hour professional seminar, one 2-credit-hour theory course, and three 3-credit-hour general graduate-level elective courses to complement his or her program. These selections must be approved by the student’s advisor.

M.S. in Occupational Therapy Courses

OTMS 699 Special Projects (1-6) 
OTMS 701 Professional Development (3). With an emphasis on leadership skills and professionalism, this course will include mentoring, supervising, managing, organizing presentations, and teaching, writing, and contributing through professional organizations (interdisciplinary and occupational therapy). Students professionalism on issues of concern to administrators, staff therapists, educators, or those in private practice. Prerequisite: Permission of Instructor. LEC
OTMS 735 Practice Models for Applied Science (3). Issues and trends relative to advanced application of theory, assessment and intervention with emphasis on pediatrics will be presented in lecture and discussion. Special projects will emphasize the student’s special interests. Although faculty directed, student presentation will be emphasized. LEC
OTMS 799 Special Topics in Occupational Therapy (1-6). An elective course to allow student investigation of special issues or problems relevant to applied research and/or practice, under the direction of a faculty member chosen by the student. Systematic coverage of current issues may include a research investigation or study related to pertinent sociocultural trends, practice factors, or emerging issues in service provision. Students will complete special projects such as oral presentations, written papers, or case analyses as negotiate with the faculty mentor. May be repeated for credit. Prerequisite: Permission of instructor. IND
OTMS 801 Applied Neuroscience (3). The course will address the major functions of the systems within the central nervous system and how they interact to produce responses to environmental demands. Sensory input, central processing, and output mechanisms will be analyzed. The student will then appraise human behavior in relation to function and dysfunction of the nervous system, both in formulating potential behavioral signs when a specific neurological site is presented, and in hypothesizing about neurological involvement when analyzing a particular individuals problems. Prerequisite: Undergraduate neuroscience course or permission of instructor. LEC
OTMS 835 Interpreting Research for Applied Science (3). This on-line course examines selected research studies, analysis methods and results employed, and applies research findings to practical problems. Students will design their own research project reflecting their area of interest. RSH
OTMS 890 Graduate Research (1-6). Students investigate an empirical question relevant to occupational therapy and write a literature review and a research proposal under the guidance of a faculty adviser. Pending approval of the proposal, the student will carry out initial phases of the project, including materials preparation and data collection. RSH
OTMS 899 Thesis (1-6). Course requires data analyses, interpretation, and scholarly writing based on individual original research carried out under the guidance of the student’s adviser. These activities, along with an oral presentation of research, must meet with approval of the student’s advisory committee to complete thesis requirements. Prerequisite: OTMS 890. THE

Ph.D. in Therapeutic Science

www.alliedhealth.kumc.edu/programs/therapeutic

The therapeutic science doctoral program is designed for students whose interests in disability and quality of life require an integrated, interdisciplinary course of study that cannot be provided by existing programs. The program attracts students who may already have obtained academic or professional master’s degrees and have a professional credential or identity (e.g., occupational therapist, speech-language pathologist, licensed clinical social worker, clinical psychologist, special educator). Many who are already working with disability issues may wish to generate knowledge for understanding disability and improving quality of life for individuals with disabilities.

Admission. Only students seeking the Ph.D. degree are admitted. The interdisciplinary program committee reviews each applicant’s preparation. Acceptable preparation must include basic science courses and statistics and design and completion of an empirical research study or thesis. If an applicant does not have adequate preparation for doctoral-level work, he or she must develop satisfactory research skills before formally entering the program. The program committee may recommend a range of options, from requiring the student to take at least 6 hours of basic statistics and methods courses and complete an independent research project, to requiring the student to earn a master’s degree.

The admission review also considers the fit between the student’s research interests and the design and goals of the program. Applicants who qualify for admission must investigate discipline-specific programs with which their interests intersect and submit a rationale for why their research and career goals can only be met by this program. The applicant’s leadership experience and potential to contribute to knowledge generation and transfer through research, teaching, or service and the extent to which the applicant’s interests and goals correspond to those of available faculty also are considered. Applicants must meet general admission requirements for graduate studies at KU. All applicants must submit a personal statement of career goals and professional development, three letters of recommendation, and one copy of all graduate and undergraduate transcripts. Application materials must be received by February 1 for fall admission.

International students or those for whom English is a second language must meet minimum English Proficiency Requirements. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information. International students may have additional requirements for visa, residency, and citizenship status. Students should contact the KUMC Office of International Programs for guidance regarding these issues during the application process.

Curriculum. The program includes a core curriculum for all students and gives each student the opportunity to create a course of study to meet her or his professional objectives. Students receive a foundation of basic knowledge as well as multidisciplinary perspectives on issues and problems related to individuals with disabilities. On completion of this program, students are prepared for academic, research, and leadership careers with institutions and agencies serving individuals with disabilities and their families.

In addition to general Graduate Studies requirements, basic requirements for the Ph.D. degree in therapeutic science include

1. Successful completion of a minimum of 57 credit hours, comprising at least 6 hours of core courses, 12 hours of research tools, 21 hours of elective courses related to the student’s area of emphasis, and 18 hours of doctoral dissertation research.
2. Competence in applied research skills, teaching, and/or service demonstrated through successful completion of the Graduate Studies Foreign Language or Other Research Skill requirement.
3. Students become candidates for the Ph.D. after successful completion of core courses, FLORS, and comprehensive examination (defense of the dissertation proposal).
4. Satisfactory completion of a written dissertation based on original research.
5. Successful oral presentation and defense of the dissertation.

It is typical for students to require the equivalent of at least three years of full-time study to fulfill these requirements.

Core Courses Offered in the Therapeutic Science Ph.D. Program
TS 800 Research Proseminar ......................................................... 1
TS 805 Multidisciplinary Theoretical Perspectives ............................. 3
TS 850 From Beliefs to Evidence ...................................................... 1-2
TS 900 Evolving Interdisciplinary Views of Disablement ........................ 1-2
TS 950 Designing Effective Knowledge Transfer .................................. 1-2
TS 980 Advanced Study in Therapeutic Science ..................................... 1-6
TS 990 Dissertation in Therapeutic Science ........................................... 1-9

Elective Options. Each student selects graduate-level elective courses to complement his or her program. These selections must be approved by the student’s adviser.

Therapeutic Science Courses
TS 800 Research Proseminar (1). A proseminar conducted by the core graduate faculty in Occupational Therapy and Therapeutic Science. Twice-monthly meetings will involve student and faculty presentations of their current research, as well as provide more opportunities to obtain feedback on research proposals. May be taken more than once for a total of four credits. (Same as OTMS 800) LEC

TS 805 Multidisciplinary Theoretical Perspectives (3). Students will identify and explore key theories in behavioral and social science with an emphasis on those currently influencing clinical reasoning. Students will demonstrate an understanding of contemporary theories and be able to compare and contrast key theories, while also developing knowledge about theory guided research and interventions. (Same as OTMS 705) LEC

TS 850 From Beliefs to Evidence (1). Analysis of the role of beliefs about practice in professional culture and how beliefs are affected by the accumulation of research evidence. Topics include the nature of science and beliefs, the nature of evidence, and the debate over evidence-based practice. Students will use topics from their own professional interests for class presentations and written assignments. May be taken more than once for a total of two credits. LEC

TS 880 Special Projects (1-6). An elective course to allow student investigation of special issues or problems relevant to applied research and/or practice, under the direction of a faculty member chosen by the student. Systematic coverage of current issues may include a research investigation or study related to pertinent sociocultural trends, practice factors, or emerging issues in service provision. Students will complete special projects such as oral presentations, written papers, or case analysis as negotiate with the faculty member. May be repeated for credit. Prerequisite: Permission of instructor. IND

TS 900 Evolving Interdisciplinary Views of Disablement (1). Assessment of how disablement from the perspective of their own discipline. May be taken more than once for a total of two credits. LEC

TS 950 Designing Effective Knowledge Transfer (1). Examination of the principles of knowledge transfer and diffusion of innovation as they relate to practices in therapeutic professions. Topics include the diffusion process, change agents, innovation adoption, and current diffusion methods. Students will evaluate diffusion processes that have occurred within their own professions. May be taken more than once for a total of two credits. LEC

TS 980 Advanced Study in Therapeutic Science (1-6). Students engage in advanced study of a topic of their interest, guided by an appropriate mentor. Methods include directed readings, interpretation of evidence, discussions, and written syntheses of existing literature. Course culminates in a written proposal for original research and an oral defense of that proposal. Credit is given only after the dissertation proposal is accepted by the student’s advisory committee. Prerequisite: Permission of instructor. SEM

TS 990 Dissertation in Therapeutic Science (1-9). Research experience leading to dissertation for doctoral students in Therapeutic Science. RSH

Physical Therapy and Rehabilitation Science
Chair: Lisa Stehno-Bittel, pthadmissions@kumc.edu
KU Medical Center, 3056 Robinson Hall, Mail Stop 2002
3901 Rainbow Blvd., Kansas City, KS 66160
www.ptrs.kumc.edu, (913) 588-6799
Professors: Pohl, Stehno-Bittel
Associate Professors: Liu, Loudon, Smirnova
Assistant Professors: Cirstea, Kluding
Clinical Assistant Professors: Sabus, Searls
Research Assistant Professors: Billinger, Sharma, Siensukon, Wang
Clinical Instructors: Denney, Gagnon, Jernigan, VanHoose

The department offers four programs: (1) a professional Doctor of Physical Therapy degree for students who plan to become physical therapists; (2) a Doctor of Philosophy degree in rehabilitation science to prepare qualified individuals for university teaching, research, service, and leadership positions in rehabilitation; (3) a D.P.T./Ph.D. combined degree for students with B.S. degrees in health-related sciences who wish to become physical therapists and Ph.D.-educated rehabilitation scientists; and (4) a post-professional D.P.T. for physical therapists who wish to update their education and work toward the Doctor of Physical Therapy degree.

Doctor of Physical Therapy
The Doctor of Physical Therapy program provides opportunities for students to learn the application of basic science principles to physical therapy practice. The practice of physical therapy includes delivery of clinical physical therapy services, consumer education on wellness, research, and management.

The graduate may apply for licensure or registration to the state in which he or she will be working. The program is accredited by the Commission on Accreditation in Physical Therapy Education.

General Admission Requirements. To be admitted to the professional degree program in physical therapy, an applicant must meet general entrance requirements. Departmental admission requirements must be completed by May 31 of the year of intended matriculation. These include

1. A baccalaureate degree from an approved college or university.

2. The following academic prerequisites:

   Humanities
   2 courses in English composition
   1 course in speech

   Social Sciences
   1 course in general psychology
   1 course in advanced psychology
   1 course in sociology
   1 course in human development

   Basic Sciences
   2 semesters or equivalent of chemistry with laboratory
   2 semesters or equivalent of physics with laboratory
   2 semesters or equivalent of biology with laboratory
   1 semester or equivalent of anatomy with laboratory
   (may be human or mammalian)
   1 semester or equivalent of human physiology with laboratory

   Mathematics
   1 course in college algebra and trigonometry or precalculus mathematics or calculus
   1 course in statistics

   Recommended
   1 course in ethics
   1 semester or equivalent of exercise physiology
   1 semester or equivalent of kinesiology

   *A course may only be used once toward fulfillment of prerequisites. The only possible exception would be a combined anatomy/physiology lecture and laboratory course of 6 semester credit hours or more.

   3. Three letters of recommendation.
4. Grade-point average of 3.0 or higher on a 4.0 scale in each of the following:
   - Required mathematics and science prerequisite courses
   - Other prerequisite courses
   - Overall grade-point average

Note: All science prerequisites must have been taken within 10 years of the application deadline. For prerequisite courses taken more than once (within the last 10 years), an average of all grades received is used for grade-point average calculation.

5. General Graduate Record Examination scores.
6. Clinical experience in physical therapy. A minimum of 32 hours in observation, volunteer, or work under the supervision of a physical therapist. Sixteen of those hours must be in a hospital setting.
7. For international applicants, a satisfactory score on the Test of English as a Foreign Language.

Degree Requirements: Professional Program. The professional program is a 36-month, full-time program beginning each summer session. Successful completion of 94 credit hours of studies is required. Courses include basic science, clinical science, clinical procedures, and clinical practice. Additionally, the student must complete a comprehensive examination and a research project.

Post-Professional D.P.T. The post-professional Doctor of Physical Therapy degree gives practicing physical therapists the opportunity to advance their knowledge in physical therapy. The program focuses on differential diagnosis, medical imaging, and evidence-based practice. Students choose one of three specialty tracks (orthopedics, neurology, or administration).

Admission. The applicant must meet general entrance requirements qualifying them for regular admission to Graduate Studies. Departmental admission requirements include

1. A baccalaureate or master’s degree in physical therapy from a CAPTE-accredited program.
2. A résumé detailing work history, formal education, continuing education, professional organizations, honors and awards, publications and presentations.
3. Three letters of recommendation.
4. A personal essay.

Degree Requirements: Post-Professional Program. In addition to general requirements, the basic requirements for the post-professional D.P.T. degree include successful completion of 27 credit hours of studies, including 18 hours of core courses, 6 hours of advanced core courses from a specialty area, and 3 hours of elective. Graduates of a CAPTE-accredited physical therapy program may qualify for an 18-credit-hour program, provided the master’s degree was received no more than seven years before starting the post-professional program.

Ph.D. in Rehabilitation Science
The Ph.D. degree in rehabilitation science prepares qualified individuals for leadership positions in research and academia. The program focuses on advancing the science of medical rehabilitation and elucidating the scientific basis for the procedures and processes used in clinical practice. Research includes human and animal studies that promote an understanding of the pathophysiology of injury, disease, functional impairment, and associated disabilities and espouse the rationale for therapies that alleviate impaired human function and related physical and mental disabilities.

Admission. The program is open to applicants with the B.S. degree or its equivalent in any of the relevant sciences. Applicants do not have to be physical therapists; however, each candidate is encouraged to have a broad background in the biological sciences (including anatomy, physiology, neuroscience, biochemistry, genetics, and cellular and molecular biology), calculus, and statistics. Other admission requirements include

1. A minimum grade-point average of 3.0 on a 4.0 scale in the last 60 credit hours of course work.
2. A satisfactory score on the general Graduate Record Examination within the previous four years.
3. For international applicants, a satisfactory score on the Test of English as a Foreign Language within the previous two years.
4. Three letters of reference from persons familiar with the applicant’s professional and academic abilities.
5. A curriculum vitae detailing work history, formal education, continuing education, professional organizations, honors and awards, research experience, publications, presentations, and grants, etc.
6. Transcripts from all colleges attended.
7. A written educational plan describing the applicant’s goals and objectives.

Degree Requirements: Ph.D. in Rehabilitation Science. In addition to general requirements, the basic requirements for the Ph.D. degree include

1. Successful completion of a minimum of 51 credit hours of studies, comprising at least 21 hours of core courses, 8 hours of research tools, one course in a Foreign Language or Other Research Skill (FLORS), 12 hours of doctoral dissertation research, and 6 hours of cognate elective courses.
2. Students become candidates for the Ph.D. after successful completion of core courses, FLORS, and the qualifying and comprehensive examinations.
3. Satisfactory completion of a dissertation based on original research.

It is expected that the equivalent of at least three years of full-time study will be needed to fulfill these requirements.

D.P.T./Ph.D. Combined Degree Program
The combined degree program integrates the professional D.P.T. degree in physical therapy with the Ph.D. degree in rehabilitation science and clinical work experience. It offers outstanding nonclinician applicants the opportunity to pursue both degrees simultaneously. This accelerated program prepares highly motivated individuals for leadership positions in research and academia. Qualified students must declare their desire to be considered for the combined degree during the admission process. To receive both degrees, students must meet the requirements for each degree. Credit hours earned in the professional D.P.T. degree program cannot be transferred toward requirements for
Some departments do not offer all courses in any one semester. See the online Schedule of Classes at www.registrar.ku.edu for current course offerings.
treated by the practicing physical therapist will be guided to compare diagnostic tests and values. This will focus on competencies and their implementation in diagnosis and treatment. The course will be delivered via the web. Prerequisite: Admission into the post-professional DPT program, or approval by the instructor. LEC

PTRS 825 Case Studies in Pathophysiology (2). Physical therapists need skills to relate human pathophysiology to its clinical presentation. The interrelationships of function and dysfunction at the molecular, cellular and tissue level (pathology), organ and systemic level (impaired) and to the total human body (functional limitations) must be understood. Each of the principles of pathophysiology of all relevant materials will be tailored to the patient population served by the therapist. Prerequisite: Admission into post-professional DPT program, or consent of instructor. LEC

PTRS 817 Ethics in Health Care (3). Basic ethical concepts, principles, relevant theories and ethical decision making models applied to major contemporary health care issues and dilemmas facing allied health professionals. Development of skills for ethical clinical decision making is the focus. Prerequisite: Admission into the post-professional DPT program, or consent of instructor. LEC

PTRS 820 Clinical Education III (2). Comprised of a four week clinical internship at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will be placed on the administration and development of treatment plans (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 756, 750, 855, 785), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based therapy practice (750) and basic physical therapy skills and procedures in the clinical setting (703, 704, 705). Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum, or consent of instructor. CLN

PTRS 822 Exercise Physiology (3). This course will provide entry-level DPT students with the knowledge of the physiological functions and adaptations of the human body with exercise. Emphasis will be placed on familiarizing students with sound medical rationale and the basis for treatment considering the immediate and long-term exercise benefits. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum, or consent of instructor. LEC

PTRS 826 Cardiopulmonary Physical Therapy (4). Anatomy, Physiology and pathophysiology of the cardiovascular and pulmonary systems are studied and related to clinical signs and symptoms. Students are introduced to common evaluation and treatment techniques, as well as the rationale for including physical therapy in the management of cardiopulmonary conditions. These topics are discussed in conjunction with case studies and current research. Prerequisite: Successful completion of the first 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 828 Medical Imaging (3). An introduction to medical imaging and an overview of its role in the health care delivery system. Topics include an introduction to basic imaging equipment with an emphasis on digital acquisition and processing, Factors affecting the quality of images and limitations to the techniques are reviewed. Imaging techniques covered include: X-rays, CT scans, Nuclear medicine, ultrasonic, MRI and PET. This course will also include a component covering the microscopic anatomy of cells. Prerequisite: Admission into the post-professional DPT program, or consent of instructor. LEC

PTRS 830 Clinical Education IV (2). This course is comprised of a four week clinical internship at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 756, 750, 855, 785), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750, 860, 861), assessing patients with neuromuscular conditions (850, 851, 852), cardiopulmonary conditions (826) and musculoskeletal conditions (846) and documentation of basic skills in the clinical setting (703, 704, 705). Prerequisite: Successful completion of the first 6 semesters of the DPT curriculum (including Clinical Education I, II, III & IV), or permission of instructor. CLN

PTRS 840 Clinical Education V (2). This course is comprised of a four week clinical internship at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 756, 750, 855, 785), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750, 860, 861), assessing patients with neuromuscular conditions (850, 851, 852), cardiopulmonary conditions (826) and musculoskeletal conditions (846) and documentation of basic skills in the clinical setting (703, 704, 705). Prerequisite: Successful completion of the first 6 semesters of the DPT curriculum (including Clinical Education I, II, III & IV), or permission of instructor. CLN

PTRS 845 Musculoskeletal Physical Therapy II (3). Incorporates concepts from PTRS 710 (Advanced Human Anatomy), PTRS 703 (Physical Therapy Tests and Measures), PTRS 711 (Applied Kinesiology and Biomechanics), and PTRS 745 (Musculoskeletal Physical Therapy I). Terminology, examination, evaluation, development of a treatment plan, treatment techniques and basic differential diagnosis skills for the spine are taught through lecture, demonstration and student participation. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum, or consent of instructor. LEC

PTRS 846 Musculoskeletal Physical Therapy III (3). Incorporates concepts from Advanced Human Anatomy, Physical Therapy Tests and Measures. Applied Kinesiology and Biomechanics, Musculoskeletal Physical Therapy I, and Musculoskeletal Physical Therapy II. Terminology, examination, evaluation, development of a treatment plan and treatment techniques and advanced differential diagnosis skills for the Temporomandibular Joint (TMJ) complex and complex peripheral and/or spinal disorders are taught through lecture, demonstration and student participation. Prerequisite: Successful completion of the first 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 850 Neuroscience (4). This course will introduce the principles of neuroscience and describe their application as relevant to rehabilitation scientists. The course will begin with the terminology of the nervous system, then cover the major functions of the peripheral, autonomic and central nervous systems. The manner in which these systems interact to produce appropriate responses to external demands will be discussed. The behavioral consequences of damage to each system will be integrated throughout. The focus will be on the motor role in perception and the control of movement. Lecture and Lab. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum, or consent of instructor. LEC

PTRS 851 Control of Human Movement (2). Will combine the physiological, neuro- psychological and biological factors that contribute to the control of voluntary movement and the learning of motor skills. Changes over the life span, as well as changes secondary to pathological conditions, will be covered, with emphasis on the effects of brain damage. The development of the control of movement, neuromuscular tension, and the effects of practice will be discussed. The course will focus on the relationship of our scientific knowledge in motor control and motor learning to the practice of physical therapy. Prerequisite: Successful completion of the first 4 semesters of the DPT curriculum, or permission of instructor. For the post-professional DPT program: Admission into the program, or consent of instructor. LEC

PTRS 852 Neurologic Physical Therapy I (4). Will integrate neurophysiology and neuroanatomy into the clinical presentation of adults with neurologic pathology. Students will learn the etiology, epidemiology signs, and symptoms of selected neurological conditions. The medical management of patients with central and peripheral nervous system disorders will be presented in relationship to the practice of physical therapy. The course will introduce examination and treatment of impairments for persons with neuromuscularopathies. Students will be pre- sented with a simple case study at the conclusion of the course. Prerequisite: Successful completion of the first 5 semesters of the DPT curriculum, or permission of the instructor. LEC

PTRS 853 Neurologic Physical Therapy II (4). This course will explore functional mobility deficits in patients with neurologic pathology. Building upon previous courses, students will apply the scientific and clinical reasoning necessary to develop a relationship of pathology, impairments, and involvement of other systems to functional deficits for adults with neurologic pathology. Contemporary motor control and motor learning theories and research evidence will be emphasized in the development of appropriate intervention programs. Psychosocial factors will also be con-
sidered in the discussion of complex patient cases. Prerequisite: Successful completion of the first 6 semesters of the DPT curriculum or permission of the instructor. LEC

PTRS 855 Pharmacology for Physical Therapists (1). Pharmacological background for the clinical treatment of patients referred to physical therapy. Fundamentals of the actions of drugs including mechanisms of therapeutic and adverse effects. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum, or consent of instructor. LEC

PTRS 857 Research Design and Method in Evidence-Based Practice (2). An introduction to research in the evidence-based physical therapy curriculum, including a blend of print and multimedia resources, research process, measurement theory, (reliability and validity), research designs, experimental design principles, research ethics, critical review and analysis of research publications, and writing of a systematic literature review. Throughout, emphasis is placed on clinical research pertinent to evidence-based practice. Prerequisite: Admission to the PhD in Rehabilitation Science program or permission of instructor. LEC

PTRS 858 Evidence-Based Rehabilitation of Patients Post-CVA (3). This course will provide students with the applied knowledge to medically screen patients for symptoms and signs that require the expertise of other health care professionals. Patient cases currently treated by the practicing physical therapist will be used to compare diagnostic tests and values. The course will focus on comorbidities and their implications in diagnosis and treatment. The course will be delivered through the web. Prerequisite: Admission into the post-professional DPT program, or approval of the instructor. LEC

PTRS 860 Evidence-Based Research Practicum I (1). Supervised and directed experiences in conducting evidence-based research activities. The research activities involved in this course are broadly defined with emphasis on the presentation and communication of an evidence-based research project. The student will be supervised by a member of the faculty. Prerequisite: Successful completion of the first 5 semesters of the DPT curriculum or permission of instructor. RSH

PTRS 861 Evidence-Based Research Practicum II (1). Supervised and directed experiences in conducting evidence-based research activities. The research activities involved in this course are broadly defined with emphasis on the presentation and communication of an evidence-based research project. The student will be supervised by a member of the faculty. Prerequisite: Successful completion of the first 6 semesters of the DPT curriculum, or consent of instructor. RSH

PTRS 862 Pathobiology of Human Function I (4). A study of the biology of pathological processes that impair human function will highlight the mechanisms by which cell/tissues repair and/or adapt as a result of injury and aging. Emphasis will be placed on the functional impairments resulting from the pathological condition, and on the body’s endogenous ability to adapt or reverse the effects of disease or injury. Prerequisite: Entry into the PhD in Rehabilitation Science program, or permission of instructor. LEC

PTRS 863 Pathobiology of Human Function II (4). A study of biology and pathological processes that impair human function with emphasis on neuromuscular diseases, injury and diseases of the central and peripheral nervous systems, and neurological disorders associated with development and aging. Prerequisite: Entry into the PhD in Rehabilitation Science program, or consent of instructor. LEC

PTRS 865 Independent Study (1-3). Individually negotiated learning experiences appropriate to the interests and background of the student. Prerequisite: Admission to the post-professional DPT program, Ph.D. in Rehabilitation Science program, or permission of instructor. IND

PTRS 870 Teaching Practicum (1-3). Directed experiences in a planned instructional activity. Student will write course objectives, plan and deliver lectures, produce practical and written exams and assign grades. Prerequisite: Entry in the PhD in Rehabilitation Science program or consent of instructor. LEC

PTRS 873 Research Practicum (1-3). This course is designed to provide supervised research experience in various laboratories in the department. Prerequisite: Entry in the PhD in Rehabilitation Science program, or consent of instructor. RSH

PTRS 875 Clinical Practicum (1-3). Specialized clinical training in a highly specific area of specialization. The primary purpose of this course is for the student to develop advanced clinical skills in his/her area of specialization. Prerequisite: Admission to the PhD in Rehabilitation Science program, or consent of instructor. CLN

PTRS 876 Administration in Physical Therapy (3). Designed to familiarize the entry-level therapist with contemporary issues in health care which impact the delivery of physical therapy, business development and entrepreneurial skills, and organizational and human resource skills. Changes in the US health care system will be discussed, including managed care concepts, essential elements and principles of management in health care organizations, and an overview of human re-

PTRS 880 Differential Diagnosis of General Medical Conditions (3). Designed to provide students with the knowledge and clinical tools to medically screen patients for the presence of symptoms and signs that require the expertise of other health care professionals. It will focus on diagnoses that are not covered by common PT practice including diseases of the endocrine system, the immune system, GI system, and neoplasias. Prerequisite: For the DPT program: Successful completion of semester 1 of the DPT curriculum, or permission of instructor. For the post-professional DPT program: admission into the program, or consent of instructor. LEC

PTRS 920 Clinical Education VI (3). Sixteen weeks of clinical internship. During the clinical internship the student will have the opportunity to develop the patient care skills needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of the first 7 semesters of the DPT curriculum (including Clinical Education I, II, III, IV, & V), or permission of instructor. CLN

PTRS 921 Clinical Education VI (3). Sixteen weeks of clinical internship. During the clinical internship the student will have the opportunity to develop the patient care skills needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of the first 7 semesters of the DPT curriculum (including Clinical Education I, II, III, IV, & V), or permission of instructor. CLN

PTRS 922 Clinical Education VI (3). Sixteen weeks of clinical internship. During the clinical internship the student will have the opportunity to develop the patient care skills needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of the first 7 semesters of the DPT curriculum (including Clinical Education I, II, III, IV, & V), or permission of instructor. CLN

PTRS 923 Clinical Education VI (4.5). Nine weeks of clinical internship. During the clinical internship the student will have the opportunity to develop the patient care skills needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of the first 7 semesters of the DPT curriculum (including Clinical Education I, II, III, IV, & V), or permission of instructor. CLN

PTRS 962 Motor Control in Rehabilitation (3). This course is designed to enhance students' understanding of sensory-motor control of movement, other factors that can impact and shape expression (kinetic and kinematics) of movement and how this knowledge can be applied for rehabilitation purposes. The primary aim of this course is to enhance critical analysis of evidence-based clinical research literature in the filed of motor control that focuses on basic science questions and to identify the relevance of that information in the filed of rehabilitation. Prerequisites: Basic knowledge in neuroscience; entry into the PhD in Rehabilitation Science program; or approval of instructor. RSH

PTRS 970 Instrumentational Analysis of Human Function (3). An in-depth study that provides critical analysis of equipment and other resources used in analyzing human motion, balance, strength, electrophysiological responses, and cardiorespiratory function. Students will be required to conduct a preliminary study, including design, methodology and data collection using one or more of these instruments. Prerequisite: Entry in the PhD in Rehabilitation Science program, or consent of instructor. LEC

PTRS 980 Graduate Research (1-10). Original laboratory investigation conducted under the supervision of a senior staff member. Prerequisite: Entry in the PhD in Rehabilitation Science program, or consent of instructor. RSH

PTRS 990 Dissertation in Rehabilitation Science (1-10). For students in advanced standing enrolled in the PhD in Rehabilitation Science program. THE

For online information about graduate programs in the School of Allied Health, see www.alliedhealth.kumc.edu.

58
See pages 12-13 for admission procedures.

Students in architecture work closely with faculty members in design studios and are encouraged to seek as many different design critics as possible during their studies.
John C. Gaunt, Dean
Michael Swann, Associate Dean
Marvin Hall, 1465 Jayhawk Blvd., Room 206
Lawrence, KS 66045-7626
archku@ku.edu or www.sadp.ku.edu
(785) 864-4281, fax: (785) 864-5393

Facilities
The School of Architecture, Design and Planning is in Marvin Hall and several adjacent buildings on KU’s main campus in Lawrence. Built in 1907, Marvin Hall was completely renovated in 1979-80 and received design awards from the Kansas City Chapter of the American Institute of Architects and the Kansas Preservation Alliance. Housed in Marvin Hall are the Hatch Reading Room and Slide Library. The privately financed reading room contains architectural references, domestic and foreign journals, and dedicated workstations. It complements KU’s Art and Architecture Library, which holds more than 170,000 volumes. Almost 100,000 architectural images are housed in the school’s slide library, and about half of these are included in a digital image library. Marvin Hall also contains the school’s computing center, separate woodworking and metal shops, a photography lab, more than 20 digital studios, a gallery, classrooms, conference rooms, and faculty offices. In nearby Snow Hall and Marvin Studios, the school has additional studios, offices, and display spaces as well as an acoustics laboratory, an illumination laboratory, two 24-hour computer laboratories, model-building shop, and CNC router and laser labs. A much-used Building Yard is situated behind Marvin Hall. The school also operates a large building materials laboratory on KU’s west campus in Lawrence. An additional digital studio, the Kansas City Urban Design Studio, is in downtown Kansas City, Missouri, at the Kansas City Design Center, a collaborative outreach center administered jointly by the architecture departments at the University of Kansas and Kansas State University.

Architectural Engineering
Architectural engineering at KU is administered by the School of Engineering. For program requirements and course descriptions, see Civil, Environmental, and Architectural Engineering in the School of Engineering chapter of this catalog or online at www.ceae.engr.ku.edu.

Architectural Engineering
Chair: Keith Diaz Moore
Marvin Hall, 1465 Jayhawk Blvd., Room 205
Lawrence, KS 66045-7626, www.sadp.ku.edu, (785) 864-3175
Professors: Diaz, Grabow, Lesnikowski, Major, Mayo, Pran, Rockhill, Spreckelmeyer
Professors Emeriti: Griffin, Kahn, McCoy, Lucas, Michel, Richardson
Associate Professors: Carswell, Criss, Diaz Moore, Gore, Jackson, Luckey, Padget, Rashid, Sander, Sanguinetti, Swann
Assistant Professors: Chang, Huppert, L’Heureux, Silva

The Department of Architecture offers four distinct plans for graduate study:
1. A Master of Architecture (M.Arch.), a professional degree for students already holding bachelor’s degrees in any field (those with architecture degrees are considered for advanced placement);
2. A Master of Arts in Architecture (M.A.)–Academic/Research Track for students interested in the study of architecture from an academic and scholarly perspective;
3. A Master of Arts in Architecture (M.A.)–Architectural Management Track for students interested in management issues confronting contemporary professional architecture practice; and
4. A Doctor of Philosophy in Architecture (Ph.D.) for students interested in engaging in robust, innovative inquiry that adds to the body of knowledge in architecture and its related fields.

Only the Master of Architecture is a professional degree. The other degrees are post-professional degrees that do not place the student on the path for architectural registration. Students seeking a career change into a professional curriculum, should apply for admission to the professional M.Arch. degree.

Admission
Regardless of background or career goals, a person whose previous records indicate the ability to succeed with advanced work may be admitted to one of the graduate programs. Admission requires a bachelor’s degree and a grade-point average of 3.0 from KU or another accredited institution or foreign university with substantially equivalent requirements for the bachelor’s degree. The academic background is reviewed before a student without a bachelor’s degree is admitted as a degree-seeking graduate student at KU. A complete application for admission consists of the following materials:
1. Graduate application;
2. One official transcript from all colleges or universities attended, showing receipt of a bachelor’s degree;
3. Three letters of recommendation from persons qualified to comment on the applicant’s intellectual abilities and probable success in graduate study;
4. Application fee, nonrefundable check or money order payable to the University of Kansas (See Admission in the General Information chapter of this catalog for further information);
5. Evidence of language proficiency if the native tongue is not English, including
(a) A degree from an English-language college or university or
(b) A Test of English as a Foreign Language score of 600 (paper based) or 250 (computer-based) or higher, with no less than 57 on each part (paper-based);
6. A statement of interest indicating the applicant’s career goals and the relationship of these goals to the specific option chosen (Those seeking advanced placement in the M.Arch. program should make this clear in this statement.);
7. A portfolio of work demonstrating the candidate’s strengths. Examples may include design or creative work and writing samples. The portfolio must not be longer than 10 pages. CD submissions are permissible, but they should be edited for precision. The portfolio is not required as part of the application for admission to the Architectural Management track of the M.A. in Architecture.

Application fees: Domestic students in architecture: paper $55, online $45.
International students in architecture: paper $60, online $55.

Graduate students in architecture have the opportunity to participate in the school’s nationally recognized Historic American Buildings Survey courses.
8. For international students, a financial statement showing minimum financial support for the first year of study (see the admissions page on the school’s Web site).

Submit your application online at www.graduate.ku.edu. Send all other requested application materials to The University of Kansas Department of Architecture Marvin Hall, 1465 Jayhawk Blvd., Room 206 Lawrence, KS 66045-7626

Be sure to check the school’s Web site for updates to the admission process or requirements.

**Master of Architecture Degree Program**

A student who wishes to pursue a professional career as a licensed architect may apply for admission to this program. In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformity with established educational standards.

Master’s degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

This Master of Architecture degree is accredited by the National Architectural Accrediting Board (NAAB). Students who have completed previous course work in an approved NAAB architecture curriculum or a preprofessional architectural degree program may achieve advanced standing. All requests for advanced standing are evaluated using the minimum qualifications for graduate study at KU, the student performance criteria established by NAAB, and procedures approved by the architecture graduate studies committee. This degree requires a sequence of six semesters and two summers of architectural design studio/synthesis experiences, each of which is accompanied by associated professional graduate courses, constituting a total of 118 credit hours. The program also has a required study abroad component, planned to occur during a student’s second summer.

There are four typical entry points to this curriculum:

1. Students without backgrounds in architecture who hold bachelor’s degrees in non-design-oriented disciplines enter the first year of the curriculum, which begins in the summer session. Year One of the curriculum is two academic semesters and two summer sessions. The total number of credit hours required for graduation is 118.

2. Students without backgrounds in architecture who hold bachelor’s degrees in a design discipline usually begin course work with the fall semester of the first year. Other curricular requirements may potentially be waived after a careful vetting of the student’s educational background. The total number of credit hours required for graduation is likely to be approximately 109.

3. Students with a preprofessional degree in architecture, such as a Bachelor of Science in Architectural Studies, are likely to be placed in the second year of the curriculum. This is commonly referred to as the 4+2 option. Students interested in being placed in this way should make clear in their statements. These students normally are asked to complete four studios (synthesis experiences), a study abroad summer experience, and architecture support courses whose number and content are determined on a case-by-case basis. The total number of credit hours required for graduation depends on the student’s previous preparation and is highly variable, but is likely to be approximately 75 hours.

4. Students who already possess an accredited professional Bachelor of Architecture degree generally enter a three-semester program that requires a study abroad experience during a summer session as well as the final year of the curriculum. The total number of credit hours required for graduation depends on the student’s previous preparation and is highly variable, but a minimum of 36 hours is required.

**Curriculum.** The curriculum is designed in three parts. The first two semesters plus two summer sessions offer an accelerated education in the foundations of architecture as a professional discipline. The second academic year emphasizes professional development, with the comprehensive studio as a capstone experience. The third and final year offers students a choice of options for an inquiry of enhanced depth typical in graduate education. This allows students to develop a specialization by the time they complete the professional degree. The timing of course offerings is subject to change. Please visit the school’s Web site for the most current information.

**Summer Session**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 502 Accelerated Design I</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 613 Visual Thinking Studio I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 503 Accelerated Design II</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 560 Site Planning for Architects</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 626 Building Technology I: Construction Systems and Assemblies</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 665 History of Urban Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 504 Accelerated Design III</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 540 History of Architecture I: Ancient and Medieval Architecture</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 552 Ethics and Leadership in Professional Practice</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 627 Building Technology II: Culture of Building Technology</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 530 Environmental Systems I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Summer Session**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 505 Accelerated Design IV</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 690 Architectural Study Abroad</td>
<td>6</td>
</tr>
</tbody>
</table>

**Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 608 Architectural Design V</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 524 Structures I</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 531 Environmental Systems II</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 541 History of Architecture II: Renaissance to Enlightenment</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 658 Programming and Pre-Design Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 690 Comprehensive Studio</td>
<td>9</td>
</tr>
<tr>
<td>ARCH 542 History of Architecture III: Modern</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 624 Structures II</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 701 Introduction to Graduate Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 800-level course: Professional Option I (student choice)</td>
<td>6</td>
</tr>
<tr>
<td>Architectural electives</td>
<td>9</td>
</tr>
</tbody>
</table>

**Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 800-level course: Professional Option II</td>
<td>6</td>
</tr>
<tr>
<td>Architectural electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Joint Professional M.Arch./B.S. in Architectural Engineering Option.** This program is for students who have completed all requirements for the Bachelor of Science (B.S.) degree in architectural engineering. (See specific degree requirements in the School of Engineering chapter of The University of Kansas Undergraduate Catalog.) The B.S. in architectural engineering is an ABET-accredited professional degree that requires a minimum of five years and 164 credit hours to complete.

Architectural engineering students who wish to complete an accredited Master of Architecture degree in addition to the B.S. in architectural engineering should apply for admission to the school’s three-and-one-half-year M.Arch. program by February 1 of the final year in architectural engineering. The application includes the completed application form and appropriate fee, a statement of purpose, and a portfolio of work. Assuming good performance in previous design studios, students are likely to receive advanced placement into the M.Arch. curriculum (normally into the second year of study).

**Dual Master of Architecture/Master of Business Administration Degree Program.** The Master of Business Administration/Master of Architecture dual degree program is designed particularly
for students intending to pursue leadership opportunities in architecture, development, or construction. The M.B.A./M.Arch. program requires four years of study, one less year than it would take to earn each degree separately. Students completing the dual degree program earn an M.B.A. from the KU School of Business and an M.Arch. from the KU School of Architecture, Design and Planning. Students complete 112 credits in the Master of Architecture program and 37 credits in the School of Business. Prospective dual degree students must already be students in the Master of Architecture program and must apply and be accepted by the School of Business. New students must complete the first year of the architecture curriculum before starting the M.B.A. curriculum and must declare their intention before completing the first year of the architecture curriculum.

For information, consult the school Web sites and program chairs. See also the School of Business chapter of this catalog.

**Master of Arts Degree Programs**

The post-professional M.A. in Architecture offers two distinct programs. The first course of study is a research-based academic program on the Lawrence campus. It is for the student who is interested in exploring various approaches in analyzing the built environment. A student with an undergraduate degree in architecture or a related discipline may enter this course of study. To receive the master’s degree, each student must complete an academic or design-related project or must take a comprehensive examination at the end of the plan of study.

The second course of study is the architectural management post-professional program, on the KU Edwards Campus in Kansas City. This course of study focuses on management issues in the practice of architecture. It is structured to be completed on a part-time basis.

For the architectural management program, please contact

**The University of Kansas Edwards Campus**

12600 Quivira Road
Overland Park, KS 66213-2402

Telephone (from Lawrence): 864-8400 or (913) 897-8400 (from other locations), http://edwardscampus.ku.edu.

1. **Master of Arts in Architecture (Academic/Research Track).**

This program is offered on the Lawrence campus for the student who is interested in the study of architecture from an academic and scholarly perspective. A student who wishes to pursue graduate study in architecture at KU must submit a statement of intent detailing academic interests and career goals. Because admission depends on the student’s objectives and the faculty’s matching research interests, potential applicants should contact the coordinator before submitting applications. Students from this program have established a strong academic tradition and won honors in national research competitions. The key to their success has been the careful selection of research topics and the ways these topics have paralleled the academic and professional interests of the architecture faculty.

For students admitted to the academic/research program at the master’s level in architecture in Lawrence, a total of 36 credit hours of course work is required. Each student must enroll in a 3-hour introductory course dealing with research methods and theory and must complete an additional 12-hour core of course work that addresses each of the four areas: (1) history/theory, (2) technology/practice, (3) design/methods, and (4) urban/social issues. In addition to the core courses, each student must complete a minimum of 15 graduate credit hours in a sequence of courses in one of the four concentrations. A minimum of 6 of these hours must be taken in one of the established concentrations. With the consent of the student’s advisor and the approval of the graduate studies committee, the student may take a maximum of 12 hours of graduate credit in course work outside the School of Architecture, Design and Planning. Six hours in the 36-hour course of study are composed of course work in which the student prepares a written project or thesis, or in additional course work in the student’s concentration to prepare for a final written examination.

Following is a selected list of recently offered courses in each of the four concentrations. Students should consult the most current course listing of the architecture department to determine which courses will be offered each semester.

**History/Theory**

- Architectural History
- Theory and Context of Architecture
- Early Renaissance Architecture
- Language of Modern Architecture
- American Landscapes
- The Art of Representation

**Current Directions in Architecture**

**Technology/Practice**

- Building Mechanical and Energy Systems
- Construction and Project Management
- Material Investigation
- Structural in Nature and Architecture
- Listening to Architecture
- Electro-Acoustics
- Visualizing Airflow

**Design/Methods**

- Computer Applications
- CAD/CAM Applications
- GIS Applications
- Architectural Photography
- Advanced Architectural Presentation Techniques

**Urban/Social Issues**

- Homeplaces
- History of Urban Design
- Reading the American City
- Architecture of Health
- The Making of Place in an Aging Society

2. **Master of Arts in Architecture (Architectural Management Track).**

The architectural management program is oriented to the administration and practice of architecture and related disciplines. It is offered on KU’s Edwards Campus in Overland Park. Classes in this program are intended to 1. Provide skills and knowledge necessary to become effective participants in the management of a design organization; 2. Provide information about the management of planning, design, and construction projects; and 3. Expose students to management issues facing the design professions.

The curriculum draws on the disciplines of business management, planning, computer science, law, and architecture to expose students to fundamental concepts of management as they relate to the business of architecture. A total of 36 credit hours of course work is required. The curriculum consists of required courses in Financial and Economic Issues, Organizational Issues, Project Delivery, Computer Applications, Law and the Design Professions, Marketing, and Contemporary Issues in Architectural Management. Students may enroll in 9 to 12 hours of graduate credit outside the required courses in the architectural management curriculum. Three to 6 hours in the 36-hour course of study are in the preparation of a written project or thesis, or in additional course work in an area of management to prepare for a final written examination.

**Graduate Certificate Program in Facilities Management**

The graduate certificate in facilities management, based at the KU Edwards Campus in Overland Park, offers a structured program that addresses the graduate educational needs of facility managers. This 15-credit-hour program keeps practicing professional facility managers abreast of the most innovative developments in each area of facilities management and helps students acquire more specialized knowledge in areas important to their careers.
The curriculum consists of 15 hours of course work divided into three components: a required 3-credit-hour course on Facility Management: Issues and Overview; 9 hours of specialized 1-credit-hour workshops that cover trends and innovations in each of the principal knowledge areas identified by the International Facility Management Association; and a 3-credit-hour Capstone Seminar focused on solving multidisciplinary facility problems.

**Doctor of Philosophy in Architecture**

The Ph.D. in Architecture educates students to become more valuable to society through academic, business, and government organizations that require greater artistic, scientific, and investigative skills. It offers candidates opportunities to develop and deepen their education in three important ways:

- Enhancing research and analytical skills with rigorous methods of inquiry and synthesis;
- Acquiring advanced knowledge specific to their area(s) of inquiry through comprehensive scholarly investigations and distinguished documentation; and
- Developing the ability to communicate knowledge in a clear and eloquent manner.

To realize this goal, the faculty has made a commitment to:
- To create, along with doctoral students, a climate in which scholarship and creativity can flourish. Underlying the advanced study of architecture at KU is an ethic regarding architectural inquiry and architectural practice; one that sustains the question, “What ought we do as architects and researchers to enhance the quality of life on this planet?” Examples of inquiry at KU that exemplify this underlying question are
  - Progressive models of practice embracing evidence-based design and design-build practices;
  - Affordable housing with a sensitive aesthetic;
  - Material investigations to create more affordable and sustainable building practices;
  - Rigorous evaluations of built artifacts to inform better design practice;
  - Translation of empirical findings of person-place interaction research into design guidelines; and
  - Critical perspectives on human settlement patterns.

Our research is founded on an ethical position. We are not involved in research simply to generate knowledge for its own sake but rather to improve the human condition through more thoughtful built form. The overall focus is on developing understanding that may inform the critical delivery processes by which humane architecture is created.

The Ph.D. in Architecture degree program is carefully crafted to allow students to engage in rewarding and potentially revolutionary scholarly investigation steeped in an atmosphere of rigorous academic pursuit. The 49-credit-hour curriculum is divided into three parts: foundation, concentrations, and advanced study. In the foundation, students must take the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 610</td>
<td>Computers and Project Development</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 609</td>
<td>Comprehensive Studio</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 601</td>
<td>Introduction to Graduate Studies</td>
<td>1-3</td>
</tr>
<tr>
<td>ARCH 600</td>
<td>Special Topics in Architecture: _____</td>
<td>6</td>
</tr>
</tbody>
</table>

Concentrations are major (12 credit hours minimum) and minor (9 credit hours minimum) curricula developed by the student in concert with the major professor. The student becomes a candidate upon passing the comprehensive examination. As a candidate, the student enters the advanced studies portion of the curriculum and begins work on the dissertation. The student must be continuously enrolled, including summer sessions, until all requirements for the degree are completed. A minimum of 9 dissertation credit hours is required for the degree.

**Architecture Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 500</td>
<td>Architectural Design VII</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 501</td>
<td>Architectural Design VIII</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 502</td>
<td>Accelerated Design I</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 503</td>
<td>Accelerated Design II</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 504</td>
<td>Accelerated Design III</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 505</td>
<td>Accelerated Design IV</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 510</td>
<td>Problems in Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 515</td>
<td>Building Information Modeling</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 516</td>
<td>Portfolio Development</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 520</td>
<td>Architectural Acoustics</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 521</td>
<td>Electro-Acoustical Systems</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 524</td>
<td>Structures I (4)</td>
<td></td>
</tr>
<tr>
<td>ARCH 526</td>
<td>Building Power Systems for Architects</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 527</td>
<td>Building Interior Lighting for Architects</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 528</td>
<td>Building Acoustical Systems for Architects</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 530</td>
<td>Environmental Systems I</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 531</td>
<td>Environmental Systems II</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 540</td>
<td>History of Architecture I: Ancient and Medieval Architecture</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 541</td>
<td>History of Architecture II: Renaissance to Enlightenment</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 542</td>
<td>History of Architecture III: Modern</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 552</td>
<td>Ethics and Leadership in Professional Practice</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 560</td>
<td>Site Planning for Architects</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 570</td>
<td>Contemporary Issues Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 571</td>
<td>Contemporary Issues Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 572</td>
<td>Contemporary Issues Seminar III</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 573</td>
<td>Financial and Economic Issues in Architecture Management</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 574</td>
<td>Organizational Issues in Architecture Management</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 575</td>
<td>Architecture Management: Managing a CAD System</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 576</td>
<td>Project Delivery in Architecture Management</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 577</td>
<td>Marketing Architectural Services</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 578</td>
<td>Legal Issues in Architectural Management</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 600</td>
<td>Special Topics in Architecture: _____</td>
<td>1-3</td>
</tr>
<tr>
<td>ARCH 601</td>
<td>Introduction to Graduate Studies</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 608</td>
<td>Architectural Design V</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 609</td>
<td>Comprehensive Studio</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 610</td>
<td>Computers and Project Development</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 613</td>
<td>Visual Thinking Studio I</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 614</td>
<td>Freehand Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 615</td>
<td>Intensive Graphics II</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 616</td>
<td>Advanced Architectural Presentation Techniques</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 618</td>
<td>Architectural Photography</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 619</td>
<td>Advanced Architectural Photography</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 622</td>
<td>Material Investigations</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 623</td>
<td>Building Practicum</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 624</td>
<td>Structures II (3)</td>
<td></td>
</tr>
<tr>
<td>ARCH 625</td>
<td>Analysis and Design of Structures for Architects</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 626</td>
<td>Building Technology I: Construction Systems and Assemblies</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 627</td>
<td>Building Technology II: Culture of Building Technology</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 628</td>
<td>Structure in Nature and Architecture</td>
<td>3</td>
</tr>
</tbody>
</table>

The post-professional M.A. in architecture offers a research-based academic program on the Lawrence campus and an architectural management program on the KU Edwards Campus.

KU’s Edwards Campus is at 12600 Quivira Road, Overland Park, KS 66213-2402, phone (from Lawrence): 864-8400 or (913) 897-8400, http://edwardscampus.ku.edu.
ARCH 629 Listening to Architecture (3).
ARCH 630 Theory and Context of Architecture (3).
ARCH 631 Issues in Contemporary Architecture (3).
ARCH 632 Contemporary French Architecture (3).
ARCH 636 Art of Architectural Machines (3).
ARCH 637 Architecture and Cosmos (3).
ARCH 638 Architecture, Art and Science (3).
ARCH 639 Current/Historical Directions in Architecture (2-3).
ARCH 642 History of Architecture III, Modern (3).
ARCH 648 Historic Preservation (3).
ARCH 650 Architect-Led Design-Build (1).
ARCH 651 Advanced Design-Build for Architects (2).
ARCH 652 Architect-Client Relations (1).
ARCH 653 Nontraditional Careers in Architecture (1).
ARCH 654 Ethics in Architectural Practice (1).
ARCH 658 Programming and Pre-Design Issues (3).
ARCH 661 Eighteenth- to 20th-Century American Landscape Design (3).
ARCH 662 Twentieth-Century American Landscape (3).
ARCH 663 Darwin, Humboldt, and Changing Ideas in Architecture (3).
ARCH 665 History of Urban Design (3).
ARCH 670 Spreadsheet Applications (1).
ARCH 671 Database Management (1).
ARCH 672 Project Management Software (1).
ARCH 673 Presentation Tools (1).
ARCH 674 Electronic Communication (1).
ARCH 675 Graphics Packages (1).
ARCH 676 Facility Management: Tools and Techniques (3).
ARCH 677 Construction Cost Estimating for Architects (1).
ARCH 678 Construction Project Management for Architects (1).
ARCH 680 Building with Intelligence (3).
ARCH 681 Defining Community (3).
ARCH 690 Architecture Study Abroad (3-6).
ARCH 691 Architecture Practicum (6).
ARCH 692 Documentation (3).
ARCH 693 Workplaces (3).
ARCH 694 Homeplaces (3).
ARCH 697 The Making of Place in an Aging Society (3).
ARCH 700 Directed Readings in Architecture: _____ (1-3). Individual study of special topics and problems. May be repeat. Prerequisite: Graduate standing. RSH
ARCH 701 Introduction to Graduate Studies (3). This course will examine issues in architectural research. It will provide an overview of graduate level studies with regard to definitions, methods, skills, and techniques. The course will consist of lectures, seminars, readings and guest presentations. The class will enable students to make informed judgments about matters of quality and quantity on architectural issues. Students will be expected to formulate sensible systems of classification for their chosen material. Students will be expected to produce papers and essays, make sample grant applications, and thesis formulations. LEC
ARCH 705 Graduate Design Studio V (6). Graduate course that emphasizes urban context and design theories. Students will undertake specialized research projects. Prerequisite: Completion of second-year graduate requirements. LAB
ARCH 706 Thesis or Project Definition (1). Seminar oriented to the clarification of the thesis or project problem and to the development of the thesis or project proposal. Prerequisite: Graduate standing. RSH
ARCH 707 Furniture Design and Production (3). The object of this course is an intensive examination of the aesthetic problems of perceiving and making quality objects. Students will be expected to engage in a series of short-term, limited scope design exercises and experiments of an architectural nature. LEC
ARCH 720 Architectural Acoustics (3). An introduction to the physics of sound. Objective and subjective evaluation and control of sound as applied to architectural spaces. Room shaping, mechanical and electrical system noise and vibration control, and electro-acoustic sound reinforcement. Prerequisite: PHSX 114 and ARCH 626 or equivalent, or consent of instructor. LEC
ARCH 721 Electro-Acoustical Systems (3). A study of electro-acoustic sound reinforcement and reproduction systems for buildings. Prerequisite: PHBX 212, or consent of instructor. LEC
ARCH 731 Architecture of Health (3). This is a seminar that will focus on the architectural dimensions of health and wellness. The course will investigate the various components that contribute to the well being (physical, emotional, spiritual) of people. The history of health care environments will be explored to show how health care environments have evolved to meet changing medical protocols and environmental technologies. A range of contemporary building types will studied, from critical-care hospitals to assisted-living residences and health spas. Students will research bibliographic sources, prepare case studies of existing health and wellness environments and prepare preliminary planning and design proposals for an environment that human well being. LEC
ARCH 732 Environmental Pattern Languages (3). An introduction to the theory of pattern languages with particular emphasis on the work of Christopher Alexander; analysis of its relationships to other architectural theories; exploration of its implications for architectural practice. LEC
ARCH 733 Analogous Thinking in Design (3). This seminar will seek analogies in psychology, medicine, biology, anthropology, and other disciplines; analogs that can serve to develop problem-solving and problem-solving skills in design. Practice sessions in morphological analysis, synectics, bisociation, and triadization will link rigorous research to methods of application. LEC
ARCH 754 Design Ethics (3). This seminar will explore both Western and Eastern concepts of ethics and morality through readings, papers, discussion, and guest speakers. The role of ethics in providing guidelines for social and societal responsibility in design will be developed. LEC
ARCH 762 Urban Design Studies (3). Seminar concerned with the factors, processes, techniques, and current issues in urban design practice. LEC
ARCH 765 Theory of Urban Design (3). An examination of the relationship between architecture and urban planning through contemporary interpretations of future urban form and the determination of the location, spatial organization, growth and decline of cities. Foundations for an interdisciplinary synthesis are examined in an attempt to bridge the hiatus between large-scale architectural design and incremental adjustments to urban dynamics. LEC
ARCH 770 Contemporary Issues Seminar I (1). A series of seminars on contemporary issues facing the profession. LEC
ARCH 771 Contemporary Issues Seminar II (1). These seminars will consist of three to four guest lecturers each semester. All students enrolled in this course will attend the same lecture as ARCH 772. Topics will be selected to reflect major issues covered in the course work, or contemporary issues facing the profession. LEC
ARCH 772 Contemporary Issues Seminar III (1). These seminars will consist of three to four guest lecturers each semester. All students enrolled in this course will attend the same lecture with ARCH 771. Topics will be selected to reflect major issues covered in the course work, or contemporary issues facing the profession. This course will be graded Satisfactory/Unsatisfactory. LEC
ARCH 773 Financial and Economic Issues in Architecture Management (3). This course will focus on the fundamentals of accounting, macroeconomics and the construction industry, and concepts related to the development and implementation of a strategic business plan. LEC
ARCH 774 Organizational Issues in Architecture Management (3). Topics that will be covered in this course include the organization of a professional practice, personnel management, and the development of effective communication skills. LEC
ARCH 775 Architecture Management: Managing a CAD System (3). This course covers the various procedures involved in managing a CAD system within a design organization. It also explores the different applications and uses of current CAD technology. Topics to be addressed include: selecting a system; billing CAD services; support services and personnel; marketing CAD; customization, file management, menus and script files; AutoLisp Programming; and integrating CAD with other programs. Prerequisite: An introductory CAD class or permission of the instructor. LEC
ARCH 776 Project Delivery in Architecture Management (3). Conventional methods for project delivery will be reviewed along with design/build, fast-track, and other techniques. The relationship of the architect and development will also be explored, as will the relationship of project development to urban design concepts. LEC
ARCH 777 Marketing Architectural Services (3). The emphasis of this course will be on the development and implementation of a marketing plan, techniques related to the marketing of specific projects, and the relationship of marketing to other components of a firm. LEC
ARCH 778 Legal Issues in Architecture Management (3). A course designed to familiarize the student with legal considerations related to professional practice. Case studies and selected readings will serve as the basis for discussion of registration, contracts, business formation, taxes, employment practices, copyright, and
ARCH 790 Architectural Study Abroad: (1-3). Organized field visits and study of selected architectural and urban sites abroad. Prerequisite: Consent of the Architecture Department Chair. LEC
ARCH 799 Independent Study: (1-3). May be repeated for credit up to a total of nine (9) credits. Prerequisite: Graduate standing and consent of instructor. IND
ARCH 800 Special Topics in Architecture: (1-3). Advanced or experimental courses of a specialized topic representing unique or changing needs and resources in the graduate program in architecture. LEC
ARCH 801 Urban and Community Issues I (6). A workshop-based course involving approved self and group directed investigations into issues of urban and community design with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Department Chair. LAB
ARCH 802 Urban and Community Issues II (6). Continuation of the critical and rigorous investigations into issues of urban and community design with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 801. LAB
ARCH 803 Design-Build and Materiality I (6). A workshop-based course involving approved self and group directed investigations into issues of design-build and/or materiality with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 or ARCH 704 and consent of the Architecture Department Chair. LAB
ARCH 804 Design-Build and Materiality II (6). Continuation of the critical and rigorous investigations into issues of design-build and/or materiality with an increasing focus on synthesis and evaluation. Prerequisite: ARCH 803. LAB
ARCH 805 Architectural Technology I (3). A workshop-based course involving approved self and group directed investigations into issues of building technology with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Department Chair. LAB
ARCH 806 Architectural Technology II (6). Continuation of the critical and rigorous investigations into issues of building technology with an increasing focus on synthesis and evaluation. Prerequisite: Successful completion of ARCH 805. LAB
ARCH 807 Healthy and Sustainable Environments I (6). A workshop-based course involving approved self and group directed investigations into healthy and sustainable environments with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Department Chair. LAB
ARCH 808 Healthy and Sustainable Environments II (6). Continuation of the critical and rigorous investigations into healthy and sustainable environments with an increasing focus on synthesis and evaluation. Prerequisite: Successful completion of ARCH 807. LAB
ARCH 809 Building Typology I (6). A workshop-based course involving approved self and group directed investigations in a particular building type with an increasing focus on synthesis and evaluation. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Department Chair. LAB
ARCH 810 Building Typology II (6). Continuation of the critical and rigorous investigations in a particular building type with an increasing focus on synthesis and evaluation. Prerequisite: Successful completion of ARCH 809. LAB
ARCH 811 Architectural Investigation I (6). A workshop-based course involving approved self and group directed investigations in a particular area of architectural investigation with a focus on problem-setting, discovery and analysis. Prerequisite: Successful completion of ARCH 609 and consent of the Architecture Department Chair. LAB
ARCH 812 Architectural Investigation II (6). Continuation of the critical and rigorous investigations in a particular area of architectural investigation with an increasing focus on synthesis and evaluation. Prerequisite: Successful completion of ARCH 811. LAB
ARCH 850 Special Topics in Management/Practice: (2-3). Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the management/practice option. IND
ARCH 851 Ethics and Leadership in Professional Practice (3). This course takes the perspective that architectural design is inherently an ethical act. Through this lens, students will contribute to the discussions through independent research and critical analyses of the assigned readings and lectures. Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Department Chair. LEC
ARCH 951 Methods of Inquiry in Architectural Research (3). This course will provide students a foundation in methods of inquiry in researching the built environment. The purpose is to train students in developing research strategies applicable to the areas of design-fabrication processes, dwelling and health, and sustainability. Students will be exposed to a variety of methods of inquiry drawn from a number of disciplines. Through critical reading and content analysis, students will consider the value of scholarly research, learn to develop research questions, understand the nature of evidence, and the writing, presentation and illustration of scholarship. The course will be a seminar format in which students will contribute to the discussions through independent research and critical analysis of assigned readings and lectures. Prerequisite: Admission to the Ph.D. in Architecture Program or consent of the Architecture Department Chair. LEC
ARCH 958 Research Practicum Preparation (1). This course will frame a research question and develop a research proposal. The course is intended to serve as preparation for ARCH 959. Prerequisite: ARCH 931 and ARCH 951. RSH
ARCH 959 Research Practicum (4). This is a research project undertaken and completed under the supervision of the student’s major professor. The student designs, executes, and completes a small scale research project and produces a document of publishable quality within his/her area of inquiry. The project is intended to serve as a pilot study leading towards the dissertation. Prerequisite: ARCH 958. RSH
ARCH 999 Doctoral Dissertation (1-9). Individual research work. A minimum of nine credits is required for the degree. May be repeated for credit. Prerequisite: Successful completion of the Comprehensive Oral Examination. THE
Design
Chair: Lois Greene
Art and Design Bldg., 1467 Jayhawk Blvd. Room 300
Lawrence, KS 66045-7531
www.sadp.ku.edu, (785) 864-4401
Professors: Branham, Dooley, Eckersley, Greene, Lau, Rake, Thomas
Professors Emeriti: Dykes, Mann-Coats, Reiber
Associate Professors: Fitzgerald, Huang, Tveit, Varney, Wertzberger, Wong
Assistant Professor Emeritus: Brejcha
Assistant Professor: Shellhorn
Lecturers: Jordan, Kemenitzer, Kuhn, Sampson-Talleur, Staples
Master of Fine Arts in Design
Admission. By permission of the Kansas Board of Regents, application for admission to graduate programs in the Department of Design may be refused if available instructional space does not allow addition of more students. The quota of new students who can be accepted into these programs is sometimes filled by February 1.
Students in design must have undergraduate backgrounds judged by the Graduate Faculty to be appropriate preparation for the specialization selected.
A departmental graduate faculty committee reviews transcripts and evaluates applicants’ slide portfolios to determine admission qualifications. In general, the committee expects the applicant to hold a B.F.A. or equivalent degree, to present about 70 hours of undergraduate credit in studio or related professional courses including about 36 hours of studio credit in a major area, to have maintained an undergraduate grade-point average of 3.0 on a 4.0 scale overall and in the proposed major, and to have had a minimum of 9 hours of credit in art history. A student applying in industrial design must present evidence of substantial achievement as a practicing professional.
Submit your application and fee online at www.ggraduate.ku.edu.
Send three letters of recommendation, statement of design philosophy, slide portfolio, slide information sheet, application form for graduate teaching assistantships, self-addressed stamped return mailer, statement of financial resources (international students), and proof of proficiency in English (international students) to The University of Kansas
Department of Design, Director of Graduate Studies
1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531
M.F.A. Degree Requirements. The program consists of a minimum of two years of full-time study and requires 60 credit hours, including thesis or exhibition, in courses approved by the department and by the graduate faculty committee. A student may concentrate on one or more specializations. Students seeking the M.F.A. in design participate in a first-year review and a second-year review before beginning thesis work. The student must pass each review level to take course work applicable to the next level. Failure to pass a review results in termination of study.

A typical program in design includes

Graduate seminar in design .......................................................... 4-6
Directed reading in design .......................................................... 4-6
Area concentration .......................................................................... 3
Graduate-level academic electives (Art history including HA 706 Seminar on Special Problems in Art History: Philosophy of Art, architecture, design history, or other graduate-level academic course) ..................................... 9
Electives .............................................................................................. 9
Thesis .................................................................................................. 9-11

The final departmental requirements may be satisfied under one of two options:

1. Presentation of a written thesis and an oral examination.

2. An exhibition of the student’s work and a catalog of the exhibition. The catalog must include a statement about the work with particular relevance to the exhibit and a visual record of the exhibition. An oral examination covering the exhibition is required.

Master of Arts Degree Programs

The Department of Design offers professional Master of Arts degrees in design management and interaction design.

Design Management. The professional M.A. degree program in design management educates students in the theory, methods, and practices relevant to managing design in an organizational and business context. The program gives students the requisite knowledge to augment their professional skills and abilities, perform as effective design managers, and advance their careers.

The M.A. program explores in depth the design function in business as an important integrative, and often interdisciplinary, area. The curriculum couples a rigorous, practical understanding of business with design’s natural capacity for handling diverse input, creative problem-solving, and human-centered understanding. The program is for prospective students who already hold design-related baccalaureate degrees and are seeking specialized study in management. Applicants should have at least two years of full-time professional work experience in design or a design-related field.

The master’s student in design management should demonstrate an advanced ability to solve design problems, manage teams and processes, communicate clearly, and produce excellent, goal-directed outcomes. The graduate will have completed significant course work and a thesis that documents independent discovery and research and will have passed an oral examination on that work.

Interaction Design. The professional M.A. degree program educates students in the theory, methods, and practices of interaction design. It gives students the requisite professional knowledge, skills, and abilities to perform as interaction designers.

Interaction design involves researching and fashioning products, services, and systems that are useful, useable, and desirable. Interaction design offers a human-centered approach to innovation, creatively mediating how businesses engage with customers and how brands and organizations can become more relevant in the marketplace. Broadly speaking, interaction design defines the contextual behavior of artifacts, environments, and systems.

The program is for prospective students who already hold design-related baccalaureate degrees and are seeking advanced study in a versatile, rapidly growing professional discipline. Applicants should have at least two years of full-time professional work experience in design or a design-related field.

The master’s student in interaction design should demonstrate the ability to conduct original design research, translate research insights into design input, and produce an interactive artifact of relevance and quality. The graduate will have completed significant course work and a thesis that documents independent discovery and research and will have passed an oral examination on that work.

Advanced Design Studies Courses

ADS 540 History and Philosophy of Design (3).
ADS 560 Topics in Design ............................................................................................................................................ (1-3).
ADS 570 Design Seminar (3).
ADS 572 Special Problems in Design (1-6).
ADS 730 Advanced Human Factors in Interaction Design (3). The study of human factors principles and guidelines are fundamental to interaction design. In this course, these principles will be illustrated and applied to real-world design projects/problems. Human physical and cognitive capabilities, computer-human interface and systems properties, interaction design methods, and the physical and socio-cultural environment will be considered. Fundamental issues in human-centered systems, basic research methods, including statistics and literature searches, will be included. Open to all university students. Graduate students will meet concurrently with INDD 512 and receive additional course work. LEC
ADS 712 Design Strategies and Methods (3). This course will cover the principles of design thinking, design processes, design strategies and methods, including techniques, development tools for the development of human-technology interfaces. Abstract through concrete representation methods and techniques will be applied to interaction design projects/problems. Information collection and analysis methods, scenario and prototyping methods, evaluation methods (empirical), creativity methods, and task-oriented methods (non-empirical) will also be covered. Methods common to design-related disciplines in the social sciences, business, architecture, communication studies and engineering are integrated. Graduate students will meet concurrently with INDD 512 and receive additional work. Prereq: Consent of instructor for all non-design students. LEC
ADS 714 Designing Business Services and Consumer Experiences (3). Business products, services and environments are often intermingled in ways that require more holistic ways of thinking and development. A challenge of service innovation is to design with an understanding of the many dimensions of human experience and satisfaction. This course elaborates how, where, when, and why design can enhance the value of business services. Theory, methods, and practice aspects of how design can be integrated into industries and firms are presented. LEC
ADS 720 Graduate Seminar in Design (1). Comparative studies of various areas of specialization in design. Repeat for credit to a maximum of six credit hours. LEC
ADS 722 Crafts Area Graduate Critique/Seminar (1). Group critique of individual research/artwork and discussion of professional practices and contemporary issues in crafts and art. Open to all craft area graduate students. Repeat for credit to a maximum of six credit hours. Graded satisfactory/unsatisfactory. LEC
ADS 730 Directed Reading in Design (1-3). Research reading and presentation of reports on specific subjects related to the students major area of specialization. Repeat for all graduate students. Graded satisfactory/unsatisfactory. LEC
ADS 740 Special Problems in Design (1-6). An in-depth study of current problems in design or crafts with an emphasis on research. Special problems proposals must be discussed with and approved by the instructor and graduate adviser prior to enrollment in the course. RSH
ADS 745 Branding and Design (3). A rapidly changing marketplace demands business strategy that is rooted in the dynamics of human culture, society, and psychology. Design thinking directly engages such factors and is, thus, well suited to help organizations formulate effective, versatile and strategic brands. This class focuses on strategic design analysis as a means to promote innovation in core brand development and extension into new applications and product categories. By aligning design with engineering, marketing, advertising, packaging, and service, business can innovate new sources of value and deliver a more powerful brand messages. Prerequisite: Consent of instructor for all non-design students. LEC
ADS 750 Design Management (3). Design Management has been described as “applied innovation” or the methodical capturing of talent and resources available inside and outside an organization to create valuable new offerings, brands, and business models. This course explores the design functions in business as a means to solve difficult challenges and develop new market-facing opportunities. Subjects include brand value creation, differentiation, coordination, and transformation. Numerous cases will be analyzed. Graded satisfactory/unsatisfactory. LEC
ADS 751 Creating Design Scenarios and Simulations (3). Most organizations are imaginatively challenged and experience difficulty innovating and marketing new concept offerings. Conventional methods spotting and validating new opportunities often lack the persuasive power necessary for change to occur. Scenario-based design and simulation offers ways to vividly represent a future that is different from the past. This course presents theory, methods and practice aspects of design scenario construction and simulations. LEC
ADS 760 Design and Strategic Innovation (3). As companies struggle with the demands of increasing consumer, intense competition and downward price pressures, there is a corresponding increase in the demand for more innovative business models and higher-value offerings. These forces have significantly broadened the strategic scope of design. Advanced, multi-disciplinary design teams are being engaged early to help guide new business and product development efforts. Why, where,
when, and how this is done in order to deliver on the promise of innovation is the subject of this course. Prerequisite: ADS 750 or with consent of instructor. LEC
ADS 765 Interaction Design (3). Interaction Design is about creating products, services or environments that offer significant experiential value to people and economic value to organizations. This course engages the comprehensive subject of design for human experience. Building on the gamut of human factors and design methods knowledge, this offers hands-on experience in the research, analysis, modeling and simulation of original and experientially compelling design solutions. Prerequisite: ADS 710, ADS 712 or with consent of instructor. LEC
ADS 770 Design Cognition (3). In a science of design, the study of "human designers" is as important as the study of designed artifacts or design tools. Since the beginning of research in Design Cognition, many empirical studies have opened up our understanding or human designers and the ways they design. While design is largely a mental activity, it interacts strongly with heterogeneous external representations. It encompasses problem definition and solving, analogical mappings, mental imaging and other mental processes. It requires team coordination and is situated in a cultural milieu that defines roles and modes of behavior. As such, distributed cognition, situated cognition, and social cognition - all have become relevant to the understanding of design cognition. The structure of a design task, the mental representation of design form and behavior, the structure of design teams, and the associated concepts of design cognition will be the subject of the course. LEC
ADS 810 Orientation Seminar (1). Studies directed to development of a thesis plan. Required of all graduate students. Offered in fall semester only. Graded S or F. LEC
ADS 850 Studio Teaching Practice (1). Graduate students only. Must hold an assistant instructor or teaching appointment. Credit earned does not satisfy any credit requirement for a degree. Graded S or U. LEC
ADS 860 Graduate Synthesis and Applications Seminar (1). Group discussion and presentations on timely industry topics. Topics will be substantial, bridging relevant program subjects and professional area boundaries. May be repeated for up to six credit hours in subsequent semesters. LEC
ADS 861 Thesis Research Seminar (1). Approaches to producing original design research. Methods, resources, topics and projects are discussed and evaluated. May be repeated for up to six credit hours in subsequent semesters. LEC
ADS 890 Thesis (1-8). For guidance refer to design department graduate guidelines. THE

■ Industrial Design Courses
INDD 508 Materials and Processes (3).
INDD 510 Human Factors in Design (4).
INDD 512 Methods in Design (3).
INDD 524 Packaging Design (3).
INDD 576 Problems in Industrial Design: _____ (3).
INDD 646 Industrial Design III (3).
INDD 648 Industrial Design IV (3).
INDD 655 Portfolio (1).
INDD 678 Advanced Problems in Industrial Design (3).
INDD 680 Thesis (6).
INDD 715 Industrial Design (2-6). Research-oriented advanced study in industrial design. Prerequisite: Graduate major in industrial design or consent of instructor. RSH
INDD 815 Industrial Design (2-6). Prerequisite: INDD 715. RSH

■ Interior Design Courses
INTD 503 Interior Programming (3).
INTD 504 Interior Planning and Design (3).
INTD 505 Interior Specifications (3).
INTD 506 Advanced Interior Planning and Design (3).
INTD 535 Portfolio (1).
INTD 570 Design Seminar: _____ (1).
INTD 606 Thesis I (3).
INTD 607 Professional Observation (3).
INTD 608 Thesis II (3).
INTD 609 Interior Design Internship (13).
INTD 715 Interior Design (2-6). Individual research. Prerequisite: INTD 606 or equivalent. RSH
INTD 815 Interior Design (2-6). Continuation of INTD 715. RSH

■ Photomedia Course
PHMD 500 Portfolio (3).

■ Visual Communication Courses
VISC 514 Graphic Design IV (6).
VISC 515 Illustration III (6).
VISC 520 Hallmark Symposium Series (0.5).
VISC 524 Senior Problems Studio (6).
VISC 525 Animation for Illustration (6).
VISC 534 Portfolio/Professional Practice (1).
VISC 535 Illustration IV (6).
VISC 540 The Arts (3-6).
VISC 550 Visual Communication Internship (3-6).
VISC 560 Special Topics In Visual Communication: _____ (3-6).
VISC 703 Illustration (3-6). LAB
VISC 706 Graphics (3-6). LAB
VISC 815 Graphics (2-6). Individual research. RSH
VISC 825 Illustration (2-6). Individual research. RSH

Urban Planning
Chair: James M. Mayo, ubpl@ku.edu
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7626, www.sadp.ku.edu, (785) 864-4184
Professors: Mayo, McClure
Professor Emeritus: Black
Associate Professors: Luckey, White
Assistant Professor: Johnson
The Master of Urban Planning (M.U.P.) is a graduate professional degree offering competence in practice in urban planning. It is the normal academic qualification for various planning and planning-related positions. The M.U.P. degree is accredited by the Planning Accreditation Board. The program places strong emphasis on policy planning and analysis in the context of urban or urbanizing environments. The program is geared toward meeting the need for planning policy on urban issues at any level of government—federal, state, regional, and local—or outside the governmental arena.

Three major areas of knowledge are necessary for competence in policy planning. These areas are (1) history and theory, which provide the conceptual framework of social, economic, and political environments within which public policy is formed; (2) quantitative methods, which provide the skills necessary to define and analyze problems through data manipulation; and (3) specialty areas, which provide focused information and skills in environmental planning, housing and development planning, land use planning and urban design, and transportation planning concentrations.

Admission
Persons whose previous records indicate ability to succeed with advanced work may be admitted to graduate studies through the Department of Urban Planning. Ordinarily, admission requires a bachelor’s degree and a grade-point average of approximately B from KU or another institution with substantially equivalent requirements for the bachelor’s degree. The student’s academic background is reviewed before an applicant without a bachelor’s degree is admitted as a degree-seeking student at KU. Admission decisions are based on the information supplied in the application materials.

The Fiske Guide to Colleges cites the School of Architecture, Design and Planning as one of the strengths of KU.

Five KU campus buildings — Bailey Hall, Dyche Hall, Lippincott Hall, Spooner Hall, and Strong Hall — are listed on the National Register of Historic Places.
A complete application consists of:
1. A completed application form;
2. A statement of the applicant’s career goals and substantive interests in urban planning and rationale for undertaking graduate study in urban planning at KU;
3. One copy of official transcripts from all colleges or universities attended;
4. Three reference forms or letters of recommendation from persons qualified to comment on the applicant’s academic abilities and probable success in graduate study;
5. Scores from the Graduate Record Examination;
6. Test of English as a Foreign Language scores, if the student’s native language is not English; and
7. Application fee: nonrefundable check or money order payable to the University of Kansas (see Admission in the General Information chapter of this catalog).

Application deadlines are July 1 for fall, December 1 for spring, and May 1 for summer admission. Candidates are urged to submit applications as early as possible. It may take several weeks to obtain all the materials required for an application file. International applicants must apply by June 1 for fall, November 1 for spring, and April 1 for summer admission. Applications for financial aid generally are considered early in the spring. In some cases, there is a February 1 application deadline. Students seeking scholarship funding must submit their scores from the Graduate Record Examination.

Submit your application online at www.graduate.ku.edu.

Send all requested application materials to:
The University of Kansas
Department of Urban Planning
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7626

Baccalaureate Preparation

A good undergraduate education in almost any discipline is acceptable preparation. Undergraduate preparation in the social sciences, engineering, business, or architecture is closely related to the direction and content of the M.U.P. program at KU.

M.U.P. Degree Program and Requirements

All students must complete 48 credit hours, which normally involves four semesters of full-time study. The required courses are:

**General** (6 credit hours)

- UBPL 736 Planning Institutions ................................................................. 3
- UBPL 763 Professional Practice ................................................................. 3

**Techniques** (9 credit hours)

- UBPL 705 Economic Analysis for Planners .............................................. 3
- UBPL 741 Quantitative Methods I .............................................................. 3
- UBPL 742 Quantitative Methods II ............................................................ 3

**Theory** (6 credit hours)

- UBPL 815 History and Theory of the Planning Process .......................... 3
- UBPL 830 Urban and Regional Theory .................................................... 3

**Concentrations.** The curriculum requires each student to specialize in one of the following substantive areas: environmental planning, housing and development planning, land use planning, and transportation planning. The student should declare the major area by the second semester of the course of study. In each concentration, the student must complete a course in theory and policy, methods, and implementation. The minimum number of credit hours for the major area depends on whether the student pursues the thesis or the nonthesis option. For the thesis option, the student takes at least 9 hours in the major area. For the nonthesis option, the student takes at least 12 hours in the major area.

The specialty courses are as follows:

**Environmental Planning**

**Theory and Policy**

- UBPL 766 Principles of Environmental Planning ..................................... 3
- UBPL 738 Environmental Planning Techniques ....................................... 3

**Implementation**

- UBPL 773 Environmental Planning Implementation .............................. 3

**Supplementary Courses**

- UBPL 730 Introduction to Land Use Planning ....................................... 3
- UBPL 735 Site Planning ............................................................................ 3
- UBPL 802 Special Topics: Policy and Methods in Environmental Planning ... 3
- POLS 624/626 Environmental Politics and Policy ..................................... 3
- ARCH 600 Special Topics in Architecture: Sustainability in Context .......... 3

**Housing and Development Planning**

**Theory and Policy**

- UBPL 710 Introduction to Housing Policy ................................................ 3
- UBPL 715 “Community” in Neighborhood Planning and Design ............. 3

**Methods**

- UBPL 764 Real Estate Development I ..................................................... 3

**Supplementary Courses**

- UBPL 714 Local Economic Development Planning ................................ 3
- UBPL 716 Community and Neighborhood Revitalization ....................... 3
- UBPL 760 Historic Preservation Planning ............................................. 3
- UBPL 768 Real Estate Development II .................................................... 3
- UBPL 802 Special Topics: Historic Preservation Economics .................. 3

**Land Use Planning and Urban Design**

**Theory and Policy**

- UBPL 730 Introduction to Land Use Planning ....................................... 3

**Methods**

- UBPL 735 Site Planning ................................................................. 3
- UBPL 764 Real Estate Development I ..................................................... 3

**Supplementary Courses**

- UBPL 662 Twentieth-Century American Landscape ................................ 3
- UBPL 739 Issues in Growth Management ............................................... 3
- UBPL 760 Historic Preservation Planning ............................................. 3

**Transportation Planning**

**Theory and Policy**

- UBPL 758 Urban Mass Transportation .................................................. 3

**Methods**

- UBPL 750 Introduction to Transportation Planning ................................. 3

**Supplementary Courses**

- CE 781 Traffic Engineering I ................................................................. 3
- CE 881 Traffic Engineering II ................................................................. 3

**Free Electives.** Besides the specialty courses, thesis students must take 3 additional credit hours, and nonthesis students must take 9 additional credit hours of elective courses, either in or outside the Department of Urban Planning.

**Thesis Option.** The thesis provides an opportunity for the student to apply individual research skills in the context of her or his interest. The thesis is a continuation of the student’s course of study rather than a separate academic effort. The format, medium, and focus of the thesis vary with the problem addressed. Six hours of academic credit are given for the thesis. A student desiring to prepare a thesis must develop, with the assistance of a faculty adviser, a thesis proposal to be submitted to the faculty thesis committee no later than the first day of classes of the se-
mester before the semester in which the student plans to gradu-
ate. The committee’s approval is required before the student may 
pursue the thesis option. A final general examination on the 
thesis and course work is held.

Nonthesis Option. The comprehensive examination may be 
taken as an alternative to the thesis. The examination provides a 
learning experience that encourages the student to synthesize 
the knowledge gained through course work and tests the stu-
dent’s competence as a generalist/specialist planner. The exam-
ination includes five questions: one question each on Planning 
Theory, Regional Planning, and Planning Methods, 
and two questions in the student’s concentration. No academic 
credit is given for this examination.

Urban Planning Courses

UBPL 502 Special Topics in Urban Planning (1-6).
UBPL 522 History of the American City (3).
UBPL 538 Environmental Planning Techniques (3).
UBPL 565 Principles of Environmental Planning (3).
UBPL 662 Twentieth-Century American Landscape (3).
UBPL 701 Directed Readings (1-6). Designed to meet the needs of students whose 
study in urban planning cannot be met with the present courses. Prerequisite: 
Consent of instructor. RSH.
UBPL 700 Environmental Economics for Planners (3). An introduction to the concepts 
and analytical techniques of economics that are most relevant to urban planners. 
The first part of the course is devoted to microeconomic theory, welfare economists, 
and the role of the government in the economy. The remainder covers public 
finance, taxation, and methods of determining the allocation of public 
resources (such as benefit-cost analysis). LEC

UBPL 710 Introduction to Housing Policy (3). Designed to provide an introduction to 
the various methods used by the public sector in order to intervene in the housing 
market. Many different programs are used by governments at all levels to serve many 
different housing goals. This course will examine many of these programs in an effort 
to understand what they are supposed to accomplish and how well they work. In all 
cases, the objective of the course is to train planners so that they have a firm under-
standing of what can and cannot be accomplished, and the various tools available 
to accomplish goals. LEC

UBPL 715 “Community” in Neighborhood Planning and Design (3). This course provides a 
place-centered approach for understanding and applying the idea of 
community to local neighborhood planning. The course explores social theories of 
community and the various effects of planning tool use on 
planning development and design. The course also makes 
the interrelationships of social, 
environmental, and economic forces at the neighborhood level and their 
relationship to community development and planning 
activities. LEC

UBPL 716 Community and Neighborhood Revitalization (3). The focus of this 
course is on the social, physical, and 
economic renewal of urban neighborhoods through the collaborative development and implementation of community 
and neighborhood revitalization plans. The course will also assess the means by which 
local government can best support community-based initiatives to redevelop 
urban neighborhoods. Students in the course will develop substantive knowledge of 
community and neighborhood revitalization techniques as well as applied 
knowledge on how to engage with a community client and develop a neighbor-
hood revitalization plan. Prerequisite: UBPL 715 or permission of instructor. LEC

UBPL 722 History of the American City II (3). This course examines the evolution of 
American cities from their European antecedents through the late 20th Century, from 
the urban planning perspective. It focuses on the changing 
forms and functions of American cities and how these changes relate to 
urban economic and political aspects of 
urbanization as well as changes in technology. Emphasis is placed on analyzing the 
relationships between historical development patterns and the current range of prob-
lems facing most U.S. cities. (Same as UBPL 522 but gives graduate credit.) LEC

UBPL 730 Introduction to Land Use Planning (3). Introduction to Land Use Plan-
ing is a policy course focusing on the principles, context, and underlying as-
sumptions of urban land use planning. It will introduce students to the planning 
process, the various elements that affect it, and the processes of urban development, 
zoning, and capital improvements planning. LEC

UBPL 731 Urban Land Use Planning (3). The Planning Law component of the land devel-
oping process. This class provides students with an understanding of both site 
analysis and site design. The site analysis component examines all of the physical, 
biological, and cultural features that affect land development. The site design component 
examines the principles and techniques for the design of single-family housing, multi-fam-
ily housing, shopping areas, workplaces, and mixed-use centers, with a focus on how these elements can be fused together to create high-quality neighborhoods, districts, and other environments. The course also covers the real estate review process for 
subdivision and development projects are evaluated for their compliance with laws and 
legislations. LEC

UBPL 736 Planning Institutions (3). This course explores the legal principles under-
lying the institutions, processes, and practices of city planning. Students are 
designed to understand the principles governing zoning, eminent domain, environmental 
impact, development rights, environmental regulation, growth management, and other plan-
ing mechanisms used to guide urban growth and control the use of land. Students 
should emerge from the course with a solid understanding of both the logic 
and routine practice of planning in a procedural and institutional 
context. LEC

UBPL 738 Environmental Planning Techniques (3). The course covers a variety of topics 
within environmental planning. Each topic is examined with respect to the scope of the 
issues, the methods of analyzing and/or measuring those issues, and the ways planners 
can address those issues in order to avoid or mitigate environmental problems. LEC

UBPL 739 Issues in Growth Management (3). This course examines all aspects of 
growth management including its history, evolution, legal foundations, and applica-
tion at the national, state, regional, and local levels. It covers both theoretical and 
application techniques such as adequate public facilities standards, site plan con-
formances, and urban growth boundaries. Impacts on affordable housing, economic develop-
ment, social equity, and environmental conservation will also be discussed. LEC

UBPL 741 Quantitative Methods I (3). Introduction to quantitative techniques util-
ized in planning analysis. Introduction to inferential statistics, computer pro-
gramming, and the use of statistical packages. LEC

UBPL 742 Quantitative Methods II (3). Advanced study in planning techniques in the 
areas of population forecasting, analysis of variance, and regression. The course makes 
substantial use of computer software. Prerequisite: UBPL 741. LEC

UBPL 746 GIS Applications for Design and Planning (3). This course will explore a 
range of Geographic Information Systems (GIS) applications for students in architec-
and planning. It will be structured as a workshop, starting with a review of basic 
GIS concepts and procedures. Different digital data sources will be explored, along 
with some of the more specialized analytical tools used in planning. LEC

UBPL 750 Introduction to Transportation Planning (3). This course is a survey course 
covering multiple modes of transportation (planes, trains, buses, automobiles, bicycles, 
and walking). The field of transportation planning is examined within a policy analysis 
framework. Knowing the policy context and understanding how decisions are made will 
assist transportation planners in understanding the world in which they operate. 
In addition to the policy context, this course will focus on the technical knowledge 
transportation planners are expected to know about federal requirements, traffic modeling, 
and specific topics like bicycle and pedestrian planning and traffic calming. LEC

UBPL 756 Travel Demand Forecasting Methods (3). The course is intended to provide 
a working knowledge of analytical transportation planning; it emphasizes 
the process of travel demand planning through the review of transportation modeling theory 
and practice. The second emphasis is to work with the TransCad model. Students 
learn how to use these models by running TransCad (GIS-based modeling soft-
ware), building a transportation model, and using it to forecast future travel 
conditions. Prerequisite: UBPL 750 or consent of instructor. LEC

UBPL 757 Transportation Planning Implementation (3). A variety of transportation 
methodologies and strategies are explored. Project management with an 
emphasis on implementation is the major focus. Students develop 
responsibility of transportation planners, consisting of several key steps including project 
initiating, planning, execution, and control. Other techniques included in this course 
are those related to the area of transportation policy. LEC

UBPL 758 Urban Mass Transportation (3). An overview of urban mass transporta-
tion in the United States today. Emphasis is on general planning of transit systems 
other than cars and trucks. Covers history of urban transit, federal transit programs, 
comparison of traditional and non-traditional technolo-
gies, operations, ridership characteristics, impacts on urban development, 
and economic, financial, and political issues. LEC

UBPL 760 Historic Preservation Planning (3). In addition to studying the history of 
the preservation movement in the United States, the course will discuss preservation at 
the state and local level, preservation at the private level, ordinance creation, legal aspects of 
preservation, the legal issues associated with the enforcement of the 
right of preservation. Projects will deal with the philosophical and current issues in preservation. LEC

UBPL 761 Historic Preservation Economics (3). This course considers the eco-
nomic strategies for the historic preservation of the built environment. Topics include 
investment tax credits, tax increment financing and tax abatement, bond is-
s, historic preservation tax credits, and other incentive programs. Students will analyze 
case studies and meet guest speakers who make preservation projects work. Class proj-
jects may include market analyses, economic feasibility studies, rehabilitation/re-
development plans, and technical studies. LEC

UBPL 763 Professional Practice (3). This course seeks to provide students with both skills and 
and technological frameworks to enhance their work as practicing planners. 
We will focus specifically on issues related to ethics, citizen participation, 
design review, and professional irresponsibility. The course will be 
programmed to “real life” lessons. Prerequisite: UBPL 741 and UBPL 815. LEC

UBPL 764 Real Estate Development I (3). This course is designed to provide a 
working knowledge of the mechanics of the real estate investment analysis. As a plan-
ing course, the emphasis is placed upon the process as performed by the practicing
planner working with the public sector. This means that the course covers much of the same material that is normally included in a real estate development course in a business school. However, this material is augmented with the study of techniques used to achieve public sector goals. Among the topics covered in the course are: the calculation of return on investment in real estate; the financing of real estate development; the various forms of property ownership; and the implications of tax laws upon the rehabilitation of historic properties and the provision of low-income housing. Prerequisite: Knowledge of spreadsheet software on a personal computer. LEC

UBPL 765 Principles of Environmental Planning (3). This course introduces students to the theories that planners and decision makers face as they strive to protect environmental resources, especially within the context of land use planning. Emphasis will be placed on the theoretical and policy considerations that guide the work of environmental planners. LEC

UBPL 766 Urban Design Implementation (3). Urban design is studied from the perspective of planning controls. Issues include: aesthetics and zoning, sign regulation, circulation control, administration, finance, downtown revitalization, and historic preservation. LEC

UBPL 768 Real Estate Development II (3). This course extends the study of real estate development planning begun in UBPL 764: Real Estate Development Planning I. The course will examine various forms of public-private participation in the real estate development process. Advanced study of various public sector programs to guide and direct the real estate development process will be undertaken, including the use of tax credits for affordable housing and for historic preservation. Projects developed within the region will be examined to illustrate the application of these techniques. Prerequisites: Successful completion of UBPL 764 or permission of instructor. LEC

UBPL 773 Environmental Planning Implementation (3). This course emphasizes the details of successful implementation of environmental plans. While the particular focus (land, water, energy, etc.) may vary, the techniques and processes studied will be broadly applicable. Students will develop environmental plans using real-world data. Prerequisite: UBPL 765, UBPL 738, or consent of instructor. LEC

UBPL 802 Special Topics: (1-6). This course is intended to afford the opportunity for individual or group projects/research in an urban planning topic. RSH

UBPL 806 Thesis—Graduate Research (1-6). Independent study and research related to the master’s thesis. Prerequisite: Consent of instructor. TH

UBPL 815 History and Theory of the Planning Process (3). The course examines development of the planning function in the United States and the role of planning in the decision-making process. The first part covers the evolution of the planning profession in a particular perspective of planning the process. The second deals with how these theories are applied in practice and the major issues that arise. LEC

UBPL 816 Politics and Planning (3). Planners operate within a highly technical yet political environment. Their expertise can be respected, ignored, or distrusted. How can uneducated bureaucrats credibly represent the public? Planners often try to bring consensus and action-taking to communities but the very structure of our democracies promotes conflict and stalemate. Understanding how power, structure, and agency influences politics will help planners balance their roles as experts, educators, guides, researchers, and conveners. LEC

UBPL 850 Urban and Regional Theory (3). The course explores the forces that shape the structure and function of cities and regions, drawing upon insights from planning, geography, economics, sociology, demography, and political science. Special attention is paid to theories that can be applied by urban planners to improve the economic performance, quality of life, and social equity of urban areas. Topics covered include the origin and development of cities, agglomeration economies, location theory, central place, migration and analysis, economic base, input-output, labor markets, urban models, regional development planning, globalization, high technology, urban poverty, and problems of regional governance. Prerequisite: UBPL 741 and UBPL 815. LEC

Joint Degree Programs

Master of Urban Planning and Master of Architecture

This joint degree combines in a four-year program the normal two-year M.U.P. degree and the three-and-one-half-year M.Arch. degree, both offered through the School of Architecture, Design and Planning. The program is intended for students interested in careers in urban design. A total of 133 credit hours is required, comprising 39 hours in urban planning and 94 hours in architecture. Applicants must meet admission requirements of both the Department of Urban Planning and the Department of Architecture. Students pursuing the M.Arch. may apply to the joint degree program during, but not after, the second year of study. Students pursuing the M.U.P. may apply to the joint degree program during, but not after, the first year of study.

M.U.P. and M.A. in American Studies

This joint degree combines in a two-and-one-half-year program the normal two-year M.U.P. degree offered through the School of Architecture, Design and Planning and the normal one-year M.A. degree in American studies offered through the College of Liberal Arts and Sciences. The program is designed for students interested in careers in policy planning and research involving the arts, social planning, cultural activities and facilities, and historic preservation.

For further information, consult the chairs.

See also American Studies in the College of Liberal Arts and Sciences chapter of this catalog.

M.U.P. and M.A. in Geography

This joint degree combines in a three-year program the two-year M.U.P. degree offered through the School of Architecture, Design and Planning and the normal one-and-a-half-year M.A. degree in geography offered through the College of Liberal Arts and Sciences. The program is designed for students interested in careers in policy planning and research involving GIS cartography, environmental planning, and land use planning.

For further information, consult the chairs.

See also Geography in the College of Liberal Arts and Sciences chapter of this catalog.

M.U.P. and M.P.A.

This joint degree combines in a three-year program the M.U.P. degree offered in the School of Architecture, Design and Planning and the Master of Public Administration degree offered through the College of Liberal Arts and Sciences. The program is intended for students interested in careers in urban policy planning and urban management.

Contact the Department of Public Administration or the Department of Urban Planning for information about degree requirements.

See also Public Administration in the College of Liberal Arts and Sciences chapter of this catalog.

M.U.P. and J.D.

The joint J.D./M.U.P. program is open to those who have earned baccalaureate degrees and whose undergraduate records indicate that they have the capacity to complete the law and urban planning programs. Applicants must meet the admission requirements of the School of Law and of the Department of Urban Planning. Applicants should apply and be admitted to each school separately before they enter the first year of the program. The Law School Admission Test is the only required entrance examination. A student who decides to enter the program while enrolled in the first year of the J.D. or M.U.P. curriculum must obtain approval from the School of Law and the Department of Urban Planning as soon as possible. No student may enter the joint degree program after completing more than four full semesters in the law school or three full semesters in the Department of Urban Planning.

A total of 115 credit hours is required for the joint degree, comprising 39 hours in urban planning and 76 hours in law. The joint degree program can be completed in four years. To pursue the degrees separately would require five years. For information on the combined program, consult the chairs.

See also the separate School of Law Catalog.
## School of Business

### Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission to Master’s Programs</td>
<td>72</td>
</tr>
<tr>
<td>Baccalaureate Preparation</td>
<td>73</td>
</tr>
<tr>
<td>Student Services</td>
<td>73</td>
</tr>
<tr>
<td>Advising</td>
<td>73</td>
</tr>
<tr>
<td>Library Resources</td>
<td>73</td>
</tr>
<tr>
<td>Wagnon Computer Laboratory</td>
<td>73</td>
</tr>
<tr>
<td>Harper Computing Classroom</td>
<td>73</td>
</tr>
<tr>
<td>Employment Opportunities &amp; the Business Career Services Center</td>
<td>73</td>
</tr>
<tr>
<td>Master of Business Administration</td>
<td>73</td>
</tr>
<tr>
<td>M.B.A. Admission</td>
<td>73</td>
</tr>
<tr>
<td>Full-Time M.B.A. Degree Program</td>
<td>73</td>
</tr>
<tr>
<td>M.B.A. Degree Requirements</td>
<td>73</td>
</tr>
<tr>
<td>Evening Professional M.B.A. Degree Program</td>
<td>74</td>
</tr>
<tr>
<td>M.B.A. Degree Requirements</td>
<td>74</td>
</tr>
<tr>
<td>Master of Accounting</td>
<td>74</td>
</tr>
<tr>
<td>M.Acc. Degree Requirements</td>
<td>74</td>
</tr>
<tr>
<td>M.Acc. Requirements</td>
<td>74</td>
</tr>
<tr>
<td>Master of Science with a Major in Business</td>
<td>74</td>
</tr>
<tr>
<td>M.S. Degree Requirements</td>
<td>75</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; J.D.</td>
<td>75</td>
</tr>
<tr>
<td>Admission</td>
<td>75</td>
</tr>
<tr>
<td>Combined Degree Requirements</td>
<td>75</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; M.A. in Area Studies</td>
<td>75</td>
</tr>
<tr>
<td>Dual M.B.A. &amp; M.Arch. Degree Program</td>
<td>75</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; Pharm.D.</td>
<td>76</td>
</tr>
<tr>
<td>M.B.A./Master’s in Management from ESC Clermont</td>
<td>76</td>
</tr>
<tr>
<td>Graduate School of Management</td>
<td>76</td>
</tr>
<tr>
<td>M.B.A. with Concentration in Petroleum Management</td>
<td>76</td>
</tr>
<tr>
<td>Doctor of Philosophy</td>
<td>76</td>
</tr>
<tr>
<td>Admission</td>
<td>76</td>
</tr>
<tr>
<td>Ph.D. Degree Requirements</td>
<td>76</td>
</tr>
<tr>
<td>Concentration</td>
<td>77</td>
</tr>
<tr>
<td>Supporting Areas</td>
<td>77</td>
</tr>
<tr>
<td>Probation &amp; Dismissal Guidelines</td>
<td>77</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>77</td>
</tr>
<tr>
<td>Teaching</td>
<td>77</td>
</tr>
<tr>
<td>Examinations</td>
<td>77</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>77</td>
</tr>
<tr>
<td>Assistantships</td>
<td>77</td>
</tr>
<tr>
<td>fellowships &amp; Grants</td>
<td>77</td>
</tr>
<tr>
<td>Business Courses</td>
<td>77</td>
</tr>
<tr>
<td>Accounting Courses</td>
<td>77</td>
</tr>
<tr>
<td>Business Courses</td>
<td>78</td>
</tr>
<tr>
<td>Business Economics Courses</td>
<td>79</td>
</tr>
<tr>
<td>Business Law Courses</td>
<td>79</td>
</tr>
<tr>
<td>Decision Sciences Courses</td>
<td>79</td>
</tr>
<tr>
<td>Entrepreneurship Courses</td>
<td>80</td>
</tr>
<tr>
<td>Finance Courses</td>
<td>80</td>
</tr>
<tr>
<td>Information Systems Courses</td>
<td>81</td>
</tr>
<tr>
<td>International Business Courses</td>
<td>82</td>
</tr>
<tr>
<td>Management &amp; Leadership Courses</td>
<td>83</td>
</tr>
<tr>
<td>Marketing Courses</td>
<td>85</td>
</tr>
<tr>
<td>Supply Chain Management Courses</td>
<td>86</td>
</tr>
</tbody>
</table>

See pages 12-13 for admission procedures.

Application fees for all business students: paper $65, online $60.
The Master of Business Administration program is designed for graduates from areas other than business administration.

Information about the M.B.A. program is online at www.business.ku.edu.
Baccalaureate Preparation
The Master of Business Administration program is for graduates from areas other than business administration. It also provides an opportunity for continued study in management for graduates from a school or department of business. The only prerequisite course work is college algebra or its equivalent. The Master of Science in business requires a baccalaureate degree in business equivalent to that required for accreditation by the American Assembly of Collegiate Schools of Business. Deficiencies in the undergraduate program result in additional hours being required for the degree. Concentrations in finance and supply chain management are offered.

The Master of Accounting program offers a one-year degree for students with baccalaureate degrees in business or accounting equivalent to that required for accreditation by the AACSB. Deficiencies in the undergraduate program result in additional hours being required for the degree.

The Ph.D. program in business requires no specific college work in business administration.

Student Services
Advising
The Graduate Advising Center in 206 Summerfield Hall coordinates advising for graduate students. Staff members advise students about program requirements, course prerequisites, and program planning. Students based at the KU Edwards Campus typically receive advising sessions over the phone and by e-mail. Advising sessions are optional.

Library Resources
The Anschutz Library offers a closed reserve service and reference services including a small print collection. The large collection in Watson Library offers additional reference and research materials. The business/economics bibliographer in the reference department can help business students use the library system. Spencer Research Library has an excellent collection on the history of economic thought and a special collection of business papers and records.

Wagnon Computer Laboratory
The Wagnon Laboratory in Summerfield Hall is available to business undergraduate and graduate students for classroom assignments and individual research projects. About 46 computers and 30 software programs are available.

Harper Computing Classroom
Equipped with 34 PCs, the Harper room is intended for teaching classes that make heavy use of computers.

Employment Opportunities and the Business Career Services Center
The school maintains a career services center in Summerfield Hall. The faculty and career services staff are committed to providing a strong student-oriented program to help students develop career objectives and target job opportunities. The BCSC cannot guarantee jobs, but it will make every effort to bring together the job-seeking candidate and potential employers in accordance with their needs, abilities, and interests. Business graduates have been successful in finding employment in their areas of interest. Positions have been available nationwide, regardless of academic area or undergraduate degree.

Students are encouraged to register with the BCSC as early as possible. As the job market tightens, employer recruiting increases. An early start can mean wider access to potential employment opportunities. Registrants’ résumés are placed on a Web-based computer database, allowing access by the BCSC, employers, and students. This allows the BCSC to perform résumé referrals quickly and companies to conduct their own résumé searches. Students can update their résumés at any time from any Internet-linked computer.

Additional services include Web job listings, career counseling, résumé consultation, a company library, and links on our home page, as well as extensive career development and job search resources. Statistics on graduates are collected each semester. Information on the number of degrees granted, percentage of graduates employed, and average starting salaries can be found online at www.business.ku.edu.

Master of Business Administration
The Master of Business Administration degree program meets the educational needs of persons seeking positions with managerial responsibilities in both the public and the private sectors. KU’s program emphasizes broad concepts of business administration but provides an option for concentration in a specific area of business management.

KU offers the M.B.A. program for full-time students, who take much of their course work on the Lawrence campus, and for working professional students, who take course work in the evenings on the KU Edwards Campus in Overland Park. The two versions of the program are tailored to meet the different needs of students. Full-time students typically are committed to a career change. The evening professional students generally seek to enhance their career paths while remaining employed. Although the two versions of the program have some differences in the way that a student progresses, the philosophy, course content, and faculty are the same for both.

M.B.A. Admission
1. Baccalaureate degree from an accredited college or university or the equivalent. No specific course work in business administration is required.
2. Two years of work experience are preferred.
3. Proficiency in mathematics at the college algebra level.
4. Selection is based on high promise of success in graduate study in business administration, as indicated by a combination of
   (a) Prior academic performance;
   (b) Scores on the Graduate Management Admission Test (GMAT);
   (c) Scores on the Test of English as a Foreign Language, if appropriate;
   (d) Prior work experience;
   (e) Two letters of recommendation from employers or faculty members;
   (f) A current résumé.
5. A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for paper applications, payable to the University of Kansas, must accompany all applications.

Full-Time M.B.A. Degree Program
The full-time M.B.A. program features an emphasis on team-building that begins with orientation and is integrated throughout the program. The degree requires a minimum of 52 graduate credit hours. Courses are sequenced to be completed on a full-time basis in three to four semesters. Requirements are designed for a person holding a baccalaureate degree in any field, with no specific course requirements in business and related areas.

M.B.A. Degree Requirements. A minimum of 52 credit hours, satisfying the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 701</td>
<td>Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BE 701</td>
<td>Managerial Economics</td>
<td>2</td>
</tr>
<tr>
<td>DSCT 701</td>
<td>Statistical Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>FIN 701</td>
<td>Financial Management</td>
<td>2</td>
</tr>
<tr>
<td>MGMT 701</td>
<td>Organizational Behavior</td>
<td>2</td>
</tr>
</tbody>
</table>
Master of Business Administration | Master of Accounting | Master of Science with a Major in Business

The Master of Accounting offers students an opportunity to study accounting topics in greater detail than at the undergraduate level. M.Acc. students must complete a track in one of three areas:

- Financial Reporting and Assurance
- Tax
- Information Systems

To receive a well-rounded business education, students take electives in other business areas such as business law, marketing, finance, and organizational behavior. In addition, the program gives students the opportunity to improve writing, oral presentation, and interpersonal skills needed for a successful career in accounting and information systems.

See Admission to Master’s Programs in this chapter for specific admission information.

M.Acc. Degree Requirements

1. Candidates for the M.Acc. degree who have undergraduate degrees in accounting from KU or other schools with equivalent undergraduate accounting programs must complete at least 30 semester credit hours of course work. Students may count 6 hours of credit at the 500-700 level toward the M.Acc. degree provided that the credit is not applied to the undergraduate degree.

2. Candidates with undergraduate degrees in business without an accounting major must complete 26 hours of undergraduate accounting classes.

M.Acc. Requirements. Required for students with undergraduate accounting or business degrees:

- **Tracks.** Students must choose a track from one of the following areas: ......... 12
  - Financial Reporting and Assurance Track (ACCT 545 and four of the following):
    - ACCT 721 Advanced Accounting Problems (3)
    - ACCT 722 Current Issues in Financial Reporting (3)
    - ACCT 726 Advanced Managerial Accounting—Quantitative and Economic Topics (3)
    - ACCT 741 Fraud Examination and Forensic Accounting (3)
    - ACCT 742 Advanced Auditing (3)
    - ACCT 743 Assessing Inherent and Control Risks (3)
    - ACCT 745 Specialized Accounting Practices (3)
  - Tax Track (all required):
    - ACCT 545 Advanced Taxation (3)
    - ACCT 731 Tax Research (3)
    - ACCT 732 Taxation for Business Entities (4)
    - ACCT 733 Tax Planning (3)

- **Information Systems Track (four courses)**
  - IST 704 Database Management (3)
  - IST 706 Systems Analysis and Design (3)
  - IST 709 Business Computer Networking (3)
  - IST 725 Contemporary Information Technology Topics (3)
  - IST 730 IT Project Management (3)

- **Designation of a Concentration:** A concentration is optional. Concentrations available are entrepreneurship, finance, human resources management, information systems, international business, management, marketing, and strategic management.

- **Degree Requirements.** A total of 48 hours is required, consisting of 25 core and 23 elective hours.

  - **Foundation Courses Required of All Students (17 credit hours):**
    - ACCT 701 Financial Accounting ........................................... 2
    - BE 701 Managerial Economics ........................................... 2
    - DSCI 702 Operations Management ........................................... 2
    - FIN 701 Financial Management ........................................... 2
    - MGMT 701 Organizational Behavior ........................................... 2
    - IBUS 701 Managing in a Global Environment ................. 1
    - MGMT 807 Ethical Decision Making in Business .......... 2
    - MKTG 701 Marketing Management ........................................... 2
    - MGMT 704 Strategic Management ........................................... 2

  - **Environmental Courses (2 credit hours):** Choose one of two courses:
    - BE 702 Global Economic Environment of Business (2) or
    - BLAW 701 Introduction to the Legal Environment of Business (2) ........... 2

  - **Breadth Courses (6 credit hours):** Choose three of four courses:
    - ACCT 702 Managerial Accounting (2)
    - DSCI 702 Operations Management (2)
    - IST 701 Managerial Information Systems (2)
    - MGMT 702 Human Resources Management (2) ................................. 6

- **Electives ................................................................. 25**

- **To receive a well-rounded business education, students take electives in other business areas such as business law, marketing, finance, and organizational behavior. In addition, the program gives students the opportunity to improve writing, oral presentation, and interpersonal skills needed for a successful career in accounting and information systems.**

- **See Admission to Master’s Programs in this chapter for specific admission information.**

**M.Acc. Degree Requirements**

1. Candidates for the M.Acc. degree who have undergraduate degrees in accounting from KU or other schools with equivalent undergraduate accounting programs must complete at least 30 semester credit hours of course work. Students may count 6 hours of credit at the 500-700 level toward the M.Acc. degree provided that the credit is not applied to the undergraduate degree.

2. Candidates with undergraduate degrees in business without an accounting major must complete 26 hours of undergraduate accounting classes.

**M.Acc. Requirements.** Required for students with undergraduate accounting or business degrees:

**Tracks.** Students must choose a track from one of the following areas: ......... 12

- **Information Systems Track (four courses)**
  - IST 704 Database Management (3)
  - IST 706 Systems Analysis and Design (3)
  - IST 709 Business Computer Networking (3)
  - IST 725 Contemporary Information Technology Topics (3)
  - IST 730 IT Project Management (3)
  - MST 725 Management of Technology I: Technology and Strategy (3)
  - MST 726 Management of Technology II: Technology and Operations (2)

- **Total credit hours required for students with undergraduate accounting degrees ........................................... 30**

- **Accounting Undergraduate Prerequisites** (26 credit hours):
  - ACCT 300 Financial Accounting I (prebusiness) ................. 4
  - ACCT 301 Managerial Accounting I (prebusiness) ............... 3
  - ACCT 320 Financial Accounting II ........................................... 3
  - ACCT 325 Managerial Accounting II ........................................... 3
  - ACCT 330 Income Tax Accounting ........................................... 3
  - ACCT 410 Financial Accounting III ........................................... 3
  - ACCT 543 Introduction to Auditing ........................................... 3

- **Total credit hours in undergraduate accounting courses ........................................... 26**

- **Total credit hours required for students with undergraduate business degrees ........................................... 56**

**Master of Science with a Major in Business**

The Master of Science degree program is for students who have completed a baccalaureate degree in business or a related degree as prescribed by the Association to Advance Collegiate Schools of Business and want to do concentrated study in a specific business area. Deficiencies in a student’s undergraduate program result in additional hours being required for the degree. These are determined before or at the time of initial enrollment.
Concentrations in finance and supply chain management are offered. Availability depends on sufficient demand, as determined by the School of Business. Supply chain management is only available to U.S. Army majors, or major-eligible captains.

It is possible for students who satisfy all entrance requirements and specific course prerequisites to complete all requirements for the degree in two semesters and a summer session. However, before they begin study, they should meet with an adviser to decide which semester to enter.

See Admission to Master’s Programs in this chapter for specific admission information.

M.S. Degree Requirements
Candidates must complete a minimum of 30 semester hours of graduate credit. Students must fulfill the following requirements:
1. Earn credit in required courses toward a concentration in finance or supply chain management.
2. Complete MGMT 704 Strategic Management (2 hours) unless a substitution is allowed.
3. Pass a comprehensive examination in the concentration, prepared and evaluated by at least three Graduate Faculty members in the area.

Undergraduate prerequisites that were not completed during the undergraduate program must be taken during initial enrollment and do not count toward fulfillment of the degree requirement of 30 hours.

Combined M.B.A. and J.D.
This program combines in four years of study the three-year J.D. program offered by the School of Law and the two-year M.B.A. program offered by the School of Business. It is for students who plan to engage in corporate law practice or enter business using law training as background. It offers training in the convergent fields of business management and law.

Admission
Students must meet the admission requirements of each school and should be admitted by both the School of Law and the School of Business before entering the second year. The Law School Admission Test and the Graduate Management Admission Test are required. A student who decides to enter the program after beginning the first year in the School of Law or in the M.B.A. program should discuss the plan with the associate dean or program director of each school as early as possible. No student may be admitted to the joint program after completing more than two full semesters in either the J.D. or the M.B.A. curriculum. Diplomas are awarded concurrently by each school at the conclusion of the joint degree requirements.

The joint M.B.A./J.D. is open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records indicate that they have the capability to complete both programs. Although the M.B.A. curriculum assumes that the applicant has had no prior college work in business, graduates from schools or departments of business may enter the program. All students in the combined program must complete a minimum of 40 credit hours of graduate work in business.

The School of Business follows general regulations in requiring a 3.0 cumulative grade-point average for all course work counted toward any master’s degree. The School of Law requires a minimum cumulative grade-point average of 2.0 (C) in all law school work. Grades received in any law courses credited toward fulfillment of the M.B.A. degree requirements are incorporated into the M.B.A. grade-point average, which ultimately must be 3.0 for the awarding of the M.B.A. degree.

Combined Degree Requirements
A typical enrollment pattern for the candidate for the two degrees under the combined program would be

<table>
<thead>
<tr>
<th></th>
<th>Business</th>
<th>Law</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>0</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Second Year</td>
<td>34</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>Third Year</td>
<td>6</td>
<td>24*</td>
<td>30</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Total Credit Earned</td>
<td>40</td>
<td>76</td>
<td>116</td>
</tr>
<tr>
<td>Credit Allowed</td>
<td>52</td>
<td>90</td>
<td>142</td>
</tr>
</tbody>
</table>

*Must include Professional Responsibility

For more information, review the materials on the regular programs in the School of Law Catalog and the M.B.A. section of this chapter of the catalog, or contact the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 W. 15th St., Lawrence, KS 66045-7577, or the University of Kansas, Director of Master’s Programs, School of Business, Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS 66045-7534.

Combined M.B.A. and M.A. in Area Studies
To respond to the need for business graduates who also have foreign language and geographic area expertise, the School of Business and the College of Liberal Arts and Sciences developed a joint M.B.A./M.A. program. The School of Business offers a joint degree program with KU’s nationally recognized area studies programs in East Asian Languages and Cultures; Latin American Area Studies; and Russian, East European, and Eurasian Studies. The Centers for East Asian Studies and Russian, East European, and Eurasian Studies are Title VI Comprehensive National Resource Centers. The program requires 64 hours of course work. After all degree requirements are met, a Master of Arts degree and a Master of Business Administration degree are awarded.

Prospective students must submit applications to the School of Business and follow application procedures for the business master’s programs. Students must meet the prerequisites of and be accepted by the School of Business and the area studies program. The School of Business is the administrative home of the joint degree program, but the school and the programs share advising duties and jointly certify completion of degree requirements.

Dual M.B.A. and M.Arch. Degree Program
The Master of Business Administration/Master of Architecture dual degree program is designed particularly for students intending to pursue leadership opportunities in architecture, development, or construction. The M.B.A./M.Arch. program requires four years of study, one less year than it would take to earn each degree separately. Students completing the dual de-
degree program earn an M.B.A. from the KU School of Business and an M.Arch. from the KU School of Architecture, Design and Planning. Students complete 112 credit hours in the Master of Architecture program and 37 credit hours in the School of Business. Prospective dual degree students must already be students in the Master of Architecture program and must apply and be accepted by the School of Business. New students must complete the first year of the architecture curriculum before starting the M.B.A. curriculum and must declare their intention before completing the first year of the architecture curriculum.

Consult the school Web sites and program chairs. See also the School of Architecture, Design and Planning chapter.

**Combined M.B.A. and Pharm.D.**

This dual degree program allows students to earn an M.B.A. from the School of Business and a Doctor of Pharmacy from the School of Pharmacy by extending their professional graduate study by one calendar year. Students gain competence and expertise in the complementary fields of business management and pharmacy. It is particularly appropriate for those intending to manage a retail or health-system pharmacy or assume a leadership role in the pharmaceutical industry or in managed health care.

Prospective students must submit applications to the School of Business and the School of Pharmacy. Students must meet the prerequisites of and be accepted by both schools.

**M.B.A./Master’s in Management from ESC Clermont Graduate School of Management**

This dual degree program allows students to earn an M.B.A. from KU and a Master’s in Management from ESC Clermont Graduate School of Management in France. The program is intended for American students who wish to pursue careers with international companies in North America or Europe. Students complete all requirements for a KU M.B.A. and take one semester of classes taught by European faculty members in English at Clermont-Ferrand. The academic preparation is followed by a four- to six-month internship in a European country.

Prospective students should submit applications to the KU School of Business, which forwards successful applications to ESC Clermont Graduate School of Management. Students must meet the normal admission requirements of and be accepted by both schools.

**M.B.A. with a Concentration in Petroleum Management**

The M.B.A. with a concentration in petroleum management offers a cutting-edge curriculum for those seeking positions with managerial responsibilities in the public and private sectors. KU’s program emphasizes broad concepts of business administration that progress to specific areas in petroleum management. KU offers the program full time on the Lawrence campus in addition to evening courses on the KU Edwards Campus. This is a specially designed course of study. It meets the requirements of active-duty U.S. Naval Supply Corps officers who usually are assigned to billets requiring this training upon completion of study at KU.

**Doctor of Philosophy**

The program is designed for students who wish to become scholar-teachers. It develops the capacity for effective teaching and original research by providing mastery of the knowledge in a particular field, a thorough understanding of research methodology, the ability to communicate effectively, and the motivation for continuing self-education. Students must specialize in a concentration and develop a broad knowledge of other areas of business and their interrelationships in the management function.

As of fall 2008, 35 students were enrolled in the Ph.D. program. The program will continue to be limited in size so each student can work closely with faculty members to receive substantial individual attention.

**Admission**

The applicant must hold at least a bachelor’s degree from an accredited college or university. No specific undergraduate preparation in business is required.

The applicant must demonstrate competence as a scholar through a high level of previous academic performance and high percentile scores on the Graduate Management Admission Test or Graduate Record Examination. Scores may not be older than five years at the time of application. In addition, international applicants must present high scores on the Test of English as a Foreign Language.

Finally, the applicant must demonstrate the ability for doctoral study in business, either by a record of achievement in previous professional or academic experience, including research and scholarship, or through letters of recommendation and a personal interview.

These requirements are intended only as suggestions for minimum admission standards. They should not be construed as a guarantee of admission to the Ph.D. program.

A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work and all other requested application materials to:

**The University of Kansas School of Business**
**Doctoral Applications**
**1300 Sunnyside Ave.**
**Lawrence, KS 66045-7534**

**Ph.D. Degree Requirements**

By the end of the third semester of the aspirant’s program (excluding summer sessions), an aspirant must complete the following qualifier requirements. All aspirants must demonstrate some proficiency in doing original research of publishable quality and some proficiency in teaching.

- **Human Resources Management,** **Organizational Behavior,** and **Strategic Management** Ph.D. students must take MGMT 905 Philosophy of the Behavioral and Organizational Sciences, MGMT 906 Behavioral Research Methods, and MGMT 916 Seminar in Organization Theory. These students also must take one course in microeconomic theory (BE 917, BE 701, or ECON 700).

See the College of Liberal Arts and Sciences chapter of this catalog for area studies program listings.

See the KU Undergraduate Catalog for information about the Doctor of Pharmacy degree.

KU business students work with faculty members who are leaders in business research.
• Finance Ph.D. students must take a two-course sequence in probability and statistical methods. The requirement could be satisfied by taking DSCI 920 and DSCI 921, or equivalent courses in other departments. Finance students also must take one course in regression (DSCI 922).

• Accounting, Decision Sciences, Information Systems, and Marketing Ph.D. students must take a two-course sequence in probability and statistical methods. The requirement could be satisfied by taking DSCI 920 and DSCI 921, or equivalent courses in other departments.

These courses should be completed in the first two years of a student’s program. In addition, students must take area-specific core courses defined by their area group. At or before the end of the aspirant’s third semester in the program, a qualifier assessment team, composed of five faculty members, holistically determines whether or not a student continues in the program.

The aspirant for the Ph.D. in business administration must have an area of concentration, supporting areas, and preparation in research methodology.

Concentration. Each aspirant, with the assistance of her or his faculty adviser and the area faculty, selects an area of concentration from the traditional business disciplines of accounting, information systems, finance, human resources, decision sciences, marketing, organizational behavior, and strategic management. An aspirant also may propose an interdisciplinary concentration that is a combination of these disciplines, or may include emphases such as international business, law, and economics. The aspirant must take at least five advanced courses in the concentration. These courses may include those offered outside the School of Business.

Supporting Areas. Course work in the area of concentration is supplemented and strengthened by study in one or two supporting areas. A supporting area is one that supplements and complements the concentration. The aspirant satisfies the supporting area requirement by taking at least four advanced courses in the supporting areas (at least two courses in each of two supporting areas or at least four courses in one supporting area). Courses recommended for preparation for the qualifier assessment may not be included in satisfying the supporting area requirement.

Probation and Dismissal Guidelines. To be in good standing, a student must maintain a 3.0 cumulative grade-point average; if the grade-point average falls below 3.0, the student is placed on probation. This is followed by a letter to the student confirming the probation and explaining the student’s options.

A student is placed on probation for one academic semester. If the cumulative grade-point average has not risen to 3.0 in the next semester of enrollment (excluding summers), the student can either be dismissed or allowed to continue on probation. Continued probation requires the area director for the student’s concentration to write a letter to the Ph.D. team explaining why the student should be allowed to continue.

A graduate student can be dismissed on recommendation of the area director for the student’s concentration. Usually a graduate student is dismissed because of a low grade-point average; however, failure of examinations or failure to make satisfactory progress toward the degree is also cause for dismissal. Academic dismissal should occur before a semester begins; but if a student is dismissed during the semester, the dismissal is effective only at the end of the semester in which the Ph.D. team gives notification of dismissal.

Research Methodology. When preparing for the qualifier assessment, area groups should ensure that the student’s program includes adequate preparation in research methodology.

Teaching. Students enroll in BUS 902 Teaching Seminar during the first semester in which they teach independently. Before the completion of the Ph.D. program, all students also must have teaching experience equivalent to teaching two undergraduate courses independently in two different semesters.

Examinations. To advance to candidacy, the student must pass a written-oral comprehensive examination in the concentration. Before completion of the written-oral comprehensive, students enroll in a Ph.D. seminar for each of four semesters. In this seminar, students and faculty present original research. Finally, the student must pass an oral defense of the dissertation research proposal and the dissertation.

Financial Aid
Students admitted to the Ph.D. program receive financial assistance. Contingent on satisfactory progress and availability of funds, the school provides financial assistance to most students for the first four years of their programs. Financial assistance is available in varying degrees through assistantships, fellowships, grants, loans, and employment.

Assistantships. During the first year, most doctoral students are appointed as research or teaching assistants. Many doctoral students also receive dissertation fellowships while writing their dissertations. During 2008-09, a 50-percent-time graduate research assistantship paid about $1,530 per month plus tuition and fees. Appointment as a graduate teaching assistant at 40-percent time or more entitles the student to a 100-percent tuition waiver. For non-native speakers of English, appointment as a graduate teaching assistant is only made after the student passes the SPT test or the Test of Spoken English administered by KU’s Applied English Center. During 2007-08, a graduate teaching assistantship paid about $1,530 per month. See Financial Aid in the General Information chapter of this catalog.

Fellowships and Grants. The School of Business has been successful in nominating doctoral students for fellowships and grants from sources outside the school. Business students have received awards from the Richard D. Irwin Foundation, the American Institute of Certified Public Accountants, Beta Gamma Sigma, the American Accounting Association, and KU. Several dissertation fellowships normally are awarded annually. These awards allow the student to receive support for a semester while working on his or her dissertation.

The School of Business maintains active files on these and other sources of fellowships and grants, recommends qualified students for the awards, and works closely with students in submitting application materials. Assistance in the form of loans or employment is available through the University of Kansas Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7518.

Business Courses

■ Accounting Courses
ACCT 543 Introduction to Auditing (3).
ACCT 545 Advanced Taxation (3).
ACCT 701 Financial Accounting (2). Financial accounting provides information to decision-makers external to the business, such as investors and lenders. The course describes the process through which economic information is captured, validated, and distributed externally in the form of financial statements. It also covers the contents of the major financial statements, focusing on how the various accounts are defined and measured and how the information can be used by external decision-makers. Not open to M.Acc. students or students with credit in ACCT 320. Enrollment restricted. LEC
ACCT 702 Managerial Accounting (2). Managerial accounting provides information to decision-makers within the business, such as supervisors and executives. The course describes the process through which economic information is captured, validated, and distributed internally as budgets and other reports. It also covers various uses of managerial accounting information for internal decision-making. These uses include planning for profitable operations, determining costs of products and services, and evaluating performance within an organization. Not open to M.Acc. students or students with credit in ACCT 325. Prerequisite: ACCT 701. Enrollment restricted. LEC
ACCT 704 Financial Statement Presentation and Analysis I (2). This course covers topics in intermediate-level financial accounting and financial statement analysis. Accounting topics are taught from an external decision-maker’s perspective.
The course is intended to help students understand complex financial statements, and to extract key financial information from a mass of detail. Topics will vary over time but can include analyses of cash flows, quality of earnings, profitability, risk, and the reporting and analysis of intangible assets. Not open to M.Acc. students or credit with ACCT 410, ACCT 721, or ACCT 722. Prerequisite: ACCT 701. Enrollment restricted. LEC

ACCT 705 Financial Statement Presentation and Analysis II (3). This course covers topics in intermediate-level financial accounting and financial statement analysis. Accounting topics are taught from an external decision-maker's perspective. The course is intended to help students understand and read financial statements, and to extract key financial information from a mass of detail. Topics will vary over time but can include financial reporting of various liabilities, derivatives and hedging, investments and acquisitions. Topics also include the interpretation of financial statements, and valuations of common stock using accounting data. Not open to M.Acc. students or students with credit in ACCT 320, ACCT 410, ACCT 721, or ACCT 722. Prerequisite: ACCT 701. Enrollment restricted. LEC

ACCT 706 Business Taxation (3). An introduction to basic concepts of income tax law with emphasis on business taxation. The factors to consider when conducting a business as a single proprietorship, corporation, S corporation, or partnership are analyzed. Prerequisite: ACCT 701 or equivalent. Enrollment restricted. LEC

ACCT 721 Advanced Accounting Problems (3). A series of topics related mainly to financial accounting for corporations. Includes accounting for acquisitions and consolidations, asset impairments and derivative instruments. Also includes accounting for partnership equity. Prerequisite: Admission to the M.Acc. program. Enrollment restricted. LEC

ACCT 722 Current Issues in Financial Reporting (3). This course is intended to help students understand how perceived financial reporting problems are addressed via the financial standard setting process. This includes the roles of standard setting agencies, accounting theory, and political and economic pressures. The course also considers the potential for the standards to have at least a minimally preferred average, as well as how recent and proposed changes to standards, and underlying trends in standard setting (such as increased use of fair value measurements, and principles-based standards). Prerequisite: Admission to the M.Acc. program. Enrollment restricted. LEC

ACCT 726 Advanced Managerial Accounting — Quantitative and Economic Topics (3). Through judicious use of quantitative methods including statistical decision theory, this course provides a conceptual analysis of several prominent managerial accounting topics. This course is intended to assist both public accountants and management accountants to understand management decision-making processes and information requirements thereof. Prerequisite: Admission to the M.Acc. program. Enrollment restricted. LEC

ACCT 731 Tax Research (3). A course designed to develop one’s ability to use the research tools available and provide comprehensive coverage of the many aspects of tax research. Emphasis is placed on locating authorities, solving tax problems, and communicating the results. Prerequisite: Admission to the M.Acc. program. Corequisite: ACCT 545. Enrollment restricted. LEC

ACCT 732 Taxation for Business Entities (4). A study of federal income taxation for corporations, subchapter S corporations, and partnerships. The tax problems associated with formation, operation, distributions, reorganizations, and selected special topics will be analyzed. Prerequisite: Admission to the M.Acc. program, ACCT 545, and ACCT 721. Enrollment restricted. LEC

ACCT 733 Tax Planning (3). A study of the fundamentals of Federal estate and gift taxation, the income taxation of estates and trusts, and various aspects of family tax planning. Prerequisite: ACCT 545 and admission to the M.Acc. program. Enrollment restricted. LEC

ACCT 741 Fraud Examination and Forensic Accounting (3). Explores various accounts receivable, sales and cash disbursements and inventory, 예치, and cash disbursements and inventory. Topics will include: concept of information, information economics, accounting information for planning and control, design of accounting information systems, variance analysis, and cost allocations. Prerequisite: Consent of Ph.D. adviser. LEC

ACCT 895 Graduate Seminar in Accounting: (0-5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC

ACCT 898 Independent Study for Master's Students (1-6). Individual study of selected current problems in the field of accounting to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Prerequisite: Completion of a graduate business management course and submission of a proposal for the proposed project approved by a supervisory faculty member prior to enrollment. RSH

ACCT 925 Seminar in Contemporary Accounting Theory II (3). Continuation of BUS 740 with emphasis upon the economic and social factors affecting the development of accounting thought. Each student will make oral and written presentations of his/her original investigation and analysis of contemporary controversial issues. Prerequisite: Consent of Ph.D. adviser. LEC

ACCT 995 Doctoral Seminar in Accounting: (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

ACCT 997 Directed Research in Accounting (1-5). Students will research selected topics in the field of business administration under the direction of a graduate faculty member. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. Prerequisite: Approval required from supervising graduate faculty member. RSH

ACCT 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business administration to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must submit written statement of proposed project. Prerequisite: Approval required from supervising faculty member and Ph.D. Team. RSH

ACCT 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

**Business Courses (ACCT, BUS)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 725</td>
<td>Seminar in Contemporary Accounting Theory</td>
<td>3</td>
<td>Continuation of BUS 740 with emphasis upon the economic and social factors affecting the development of accounting thought. Each student will make oral and written presentations of his/her original investigation and analysis of contemporary controversial issues. Prerequisite: Consent of Ph.D. adviser. LEC</td>
</tr>
<tr>
<td>ACCT 726</td>
<td>Advanced Managerial Accounting — Quantitative and Economic Topics</td>
<td>3</td>
<td>Through judicious use of quantitative methods including statistical decision theory, this course provides a conceptual analysis of several prominent managerial accounting topics. This course is intended to assist both public accountants and management accountants to understand management decision-making processes and information requirements thereof. Prerequisite: Admission to the M.Acc. program. Enrollment restricted. LEC</td>
</tr>
<tr>
<td>ACCT 727</td>
<td>Tax Research</td>
<td>3</td>
<td>A course designed to develop one’s ability to use the research tools available and provide comprehensive coverage of the many aspects of tax research. Emphasis is placed on locating authorities, solving tax problems, and communicating the results. Prerequisite: Admission to the M.Acc. program. Corequisite: ACCT 545. Enrollment restricted. LEC</td>
</tr>
<tr>
<td>ACCT 728</td>
<td>Taxation for Business Entities</td>
<td>4</td>
<td>A study of federal income taxation for corporations, subchapter S corporations, and partnerships. The tax problems associated with formation, operation, distributions, reorganizations, and selected special topics will be analyzed. Prerequisite: Admission to the M.Acc. program, ACCT 545, and ACCT 721. Enrollment restricted. LEC</td>
</tr>
<tr>
<td>ACCT 729</td>
<td>Tax Planning</td>
<td>3</td>
<td>A study of the fundamentals of Federal estate and gift taxation, the income taxation of estates and trusts, and various aspects of family tax planning. Prerequisite: ACCT 545 and admission to the M.Acc. program. Enrollment restricted. LEC</td>
</tr>
<tr>
<td>ACCT 730</td>
<td>Fraud Examination and Forensic Accounting</td>
<td>3</td>
<td>Explores various accounts receivable, sales and cash disbursements and inventory, 예치, and cash disbursements and inventory. Topics will include: concept of information, information economics, accounting information for planning and control, design of accounting information systems, variance analysis, and cost allocations. Prerequisite: Consent of Ph.D. adviser. LEC</td>
</tr>
</tbody>
</table>

Students graduating from the Ph.D. program in business have taken positions at such prestigious institutions as Duke, Rutgers, and Texas A&M. Business doctoral students receive a great deal of faculty mentoring as they prepare to be outstanding teachers and researchers.
BUS 898 Professional Leadership and Development (3). The objective of this course is to improve the teaching effectiveness of the participants. Highly effective teachers demonstrate the teaching techniques and discuss the reasons underlying their actions. School of Business Ph.D. students are required to take this seminar during the first semester in which they are the instructor of record for a course. LEC

Business Economics Courses

BE 701 Managerial Economics (2). This course uses economic theory and methodology to understand and improve managerial decision making. The focus is on the role of markets in determining business and individual opportunities to create value, the behavior of individuals and firms, and the consequences of alternative market structures and business policies. Course content includes demand, production, cost analysis, supply and demand analysis, price and non-price competition, and market structure.重型经济理论和方法论，为商业决策提供理论基础。课程内容包括需求、生产、成本分析、供给与需求分析、价格和非价格竞争，以及市场结构。LEC

BE 702 Global Economic Environment of Business (2). This course uses economic theory to explain how business functions in a global context. Throughout the course, the impact of the global economic environment on business decision making and performance is emphasized. Students will learn the ways in which government monetary and fiscal and regulatory policies affect global markets and firm performance. LEC

BE 710 Organizational Economics (2). This course applies the insights of the economic theory of the firm to the management of organizations. Topics covered include the organizational design and organizational structure; separation of ownership and control; the theory of the firm; the economics of property rights; corporate governance; the market for corporate control; the role of corporate law in the theory of the firm; executive compensation contracts; ownership structure; capital structure and managerial incentives; conflicts between shareholders and bondholders, and stakeholders; vertical integration through ownership or contract; M-form versus U-form of corporate hierarchy; and introduction to market-based management. Prerequisite: BE 701 or consent of instructor. LEC

BE 712 Political Strategies for Managers (2). Managers act within the context of both markets and “non-markets” the latter composed of laws, regulations, and guidelines. This course analyzes business strategies that can effectively promote the firm’s interests in the non-market sphere, and applies this strategic framework in working through selected cases. Cases will involve both mature business regulation and emerging policy issues. Students are assessed through presentations and written cases. LEC

BE 713 Public Policy Toward Business (2). This course examines justifications for government interventions in business practice and structure. The implications of various regulatory policies, as well as those of deregulation. Topics include: environmental regulations, direct economic regulation of industries, antitrust law, subsidization of firms and industries, and privatization will be considered. Prerequisite: BE 701 or consent of instructor. LEC

BE 795 Special Topics in Business: ____ (2-5). A variable-topic course open to graduate and selected undergraduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC

BE 895 Graduate Seminar in Business Economics: ____ (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC

BE 898 Independent Study for Master’s Students (1-6). Individual study of selected current problems in the field of economics to be adapted to the special interests of individual students. Prerequisite: BE 710 or consent of instructor. LEC

Decision Sciences Courses

DSCI 500 Individual Research in Decision Sciences (1-5). A research project under the supervision of a faculty member. Prerequisites: DSCI 795 and consent of instructor. LEC

DSCI 701 Statistical Decision Making (2). An introduction to data gathering and analysis with an emphasis on problem solving for decision making and process improvement in a business setting. The role of numerical data in understanding of business problems and in the evaluation of planned improvements is studied, along with the study of variation commonly occurring in business processes and methods of reducing this variation. Statistical tools and concepts are used to supplement the analysis and in the problem solving. Topics covered may include statistical methods such as exploratory data analysis, graphical analysis, Pareto analysis, stratification analysis, confidence intervals, hypothesis testing, and correlation and covariance. LEC

DSCI 702 Operations Management (2). This course examines the business from an operations mindset. Topics covered include supplier relationships, JIT and OPT, quality, customer-focus, and manufacturing as a competitive advantage. A systems approach is applied to forecast demands in order to predict the resource needs of the system. Not open to students with credit in BLAW 525 or MGMT 525. (Same as MGMT 724.) LEC

DSCI 710 Business Forecasting Methods and Applications (3-4). A survey of forecasting methods and application. Essential concepts underlying these methods are discussed, including cost and performance characteristics. Criteria for selection of appropriate methods are developed. Issues concerning effective utilization for forecasting in several corporate planning situations are considered. Prerequisite: IST 701. Enrollment restricted. LEC

DSCI 715 Managing for Quality Improvement (3). This course will take a closer look at various aspects of the total quality theory and its practices. Particular attention will be paid to the foundational theories of quality management. Deming’s 14 principles of management and key tenets of Six Sigma. Additional topics include an examination of the continual improvement change process, including strategies for getting started, and issues to address during a transformation to a total quality model of operation. Prerequisite: DSCI 701. Enrollment restricted. LEC

DSCI 730 Managing Customer-Focused Enterprises (2). An introduction to management principles supporting the concept that a primary goal of a business is to meet the needs of its customers. To accomplish this goal, organizations must design, build, and deliver products and services that meet customer needs in a resource-effective manner. Topics covered include the role of the customer, the nature and impact of customer improvements in theory and action, and the process of managing customer relations and organizational processes. The nature of continual organizational learning, and the resource-effective management of customer relationships. LEC

DSCI 740 Seminar in Decision Sciences: ____ (2). This course will cover theories of decision making under uncertainty and competition. Examples of topics that may be covered are Bayesian decision theory, game theory, dynamic programming, and their applications. Automated aids for making decisions may be used. Prerequisites: DSCI 701 and DSCI 702, or consent of instructor. Enrollment restricted. LEC

Business Law Courses

BLAW 505 Legal Aspects of the Management Process (3). This course focuses on understanding legal rights and duties and ethical responsibilities in the business environment and addressing legal risks in business decision making. This is an introductory course which includes an overview of several foundational areas of law that are highly relevant to business. LEC

BLAW 507 Legal Aspects of Commercial Contracts and Torts (2). A course focused primarily on principles of contract and tort law. Contract law and tort law serve as the foundation for many other areas of law that are relevant in the business environment. Prerequisite: BLAW 301 or BLAW 701. LEC

BLAW 704 Commercial Law (3). An examination of the Uniform Commercial Code and related legal topics, such as bankruptcy and property law. Not open to students with credit in BLAW 515. Prerequisite: BLAW 301 or BLAW 701. LEC

BLAW 709 Negligence and Insurance (2). This course will focus on the theory and practice of negotiation and dispute resolution in business contexts. It will focus on the use of alternatives to litigation, such as various forms of arbitration, mediation, and, especially, negotiation. In addition to emphasizing negotiation and mediation skills, application of third-party dispute resolution in transactions. Appreciation of concepts will be promoted through role play simulations. Not open to students with credit in BLAW 525 or MGMT 525. (Same as MGMT 724.) LEC

DSCI 730 Managing Customer-Focused Enterprises (2). An introduction to management principles supporting the concept that a primary goal of a business is to meet the needs of its customers. To accomplish this goal, organizations must design, build, and deliver products and services that meet customer needs in a resource-effective manner. Topics covered include the role of the customer, the nature and impact of customer improvements in theory and action, and the process of managing customer relations and organizational processes. The nature of continual organizational learning, and the resource-effective management of customer relationships. LEC

DSCI 740 Seminar in Decision Sciences: ____ (2). This course will cover theories of decision making under uncertainty and competition. Examples of topics that may be covered are Bayesian decision theory, game theory, dynamic programming, and their applications. Automated aids for making decisions may be used. Prerequisites: DSCI 701 and DSCI 702, or consent of instructor. Enrollment restricted. LEC

DSCI 701 Statistical Decision Making (2). An introduction to data gathering and analysis with an emphasis on problem solving for decision making and process improvement in a business setting. The role of numerical data in understanding of business problems and in the evaluation of planned improvements is studied, along with the study of variation commonly occurring in business processes and methods of reducing this variation. Statistical tools and concepts are used to supplement the analysis and in the problem solving. Topics covered may include statistical methods such as exploratory data analysis, graphical analysis, Pareto analysis, stratification analysis, confidence intervals, hypothesis testing, and correlation and covariance. LEC

DSCI 702 Operations Management (2). This course examines the business from an operations mindset. Topics covered include supplier relationships, JIT and OPT, quality, customer-focus, and manufacturing as a competitive advantage. A systems approach is applied to forecast demands in order to predict the resource needs of the system. Not open to students with credit in BLAW 525 or MGMT 525. (Same as MGMT 724.) LEC

DSCI 710 Business Forecasting Methods and Applications (3-4). A survey of forecasting methods and application. Essential concepts underlying these methods are discussed, including cost and performance characteristics. Criteria for selection of appropriate methods are developed. Issues concerning effective utilization for forecasting in several corporate planning situations are considered. Prerequisite: IST 701. Enrollment restricted. LEC

DSCI 715 Managing for Quality Improvement (3). This course will take a closer look at various aspects of the total quality theory and its practices. Particular attention will be paid to the foundational theories of quality management. Deming’s 14 principles of management and key tenets of Six Sigma. Additional topics include an examination of the continual improvement change process, including strategies for getting started, and issues to address during a transformation to a total quality model of operation. Prerequisite: DSCI 701. Enrollment restricted. LEC

DSCI 730 Managing Customer-Focused Enterprises (2). An introduction to management principles supporting the concept that a primary goal of a business is to meet the needs of its customers. To accomplish this goal, organizations must design, build, and deliver products and services that meet customer needs in a resource-effective manner. Topics covered include the role of the customer, the nature and impact of customer improvements in theory and action, and the process of managing customer relations and organizational processes. The nature of continual organizational learning, and the resource-effective management of customer relationships. LEC

DSCI 740 Seminar in Decision Sciences: ____ (2). This course will cover theories of decision making under uncertainty and competition. Examples of topics that may be covered are Bayesian decision theory, game theory, dynamic programming, and their applications. Automated aids for making decisions may be used. Prerequisites: DSCI 701 and DSCI 702, or consent of instructor. Enrollment restricted. LEC
DSCI 744 Statistical Process Control and Improvement (2-3). This course deals with process improvement through the reduction and control of variations inherent in business organizations. The result of reduced variation is an improvement of integral organizational functions, a reduction of costs, and a minimization of defects in the marketplace. Data driven improvement is emphasized. Topics covered include advanced control charts, statistical process capability and the use of designed experiments in process improvement. Particular emphasis will be given to methods used to analyze a given process, to the use of statistical tools to stabilize an entire process, to the understanding of the nature of variation yielding a reduced process variation. Prerequisite: DSCI 701. Enrollment restricted. LEC.

DSCI 746 Contemporary Issues in Operations Management (3). This course will examine the major manufacturing and the operating strategies used by firms today. A list of potential research topics includes quality improvement, theory of constraints, just-in-time, and manufacturing planning and control systems. Pros and cons of each strategy will be discussed. Implementation issues will also be discussed. Prerequisite: DSCI 702. Enrollment restricted. LEC.

DSCI 799 Special Topics in Decision Sciences: _____ (1-12). (V) Individual research work. THE. Enrollment restricted. A variable-topic seminar open to graduate and selected undergraduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC.

DSCI 895 Graduate Seminar in Decision Sciences: _____ (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC.

DSCI 898 Independent Study for Master's Students (1-6). Individual study of selected current problems in the field of decision science to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Prerequisite: Determined by faculty members offering the course. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. LEC.

DSCI 920 Probability for Business Research (3). This course covers the theory of probability and its use for research in the business disciplines. The course is designed primarily for Ph.D. students in the School of Business. Prerequisite: DSCI 920. LEC.

DSCI 922 Advanced Regression (3). This course presents various statistical tools for undertaking quantitative research in business. The regression model under the full ideal conditions is discussed, along with methodological issues that arise when these ideal conditions are violated, as often occurs in business research. A high degree of theoretical rigor is maintained, along with an emphasis on practical applications through assignments that require data analysis. Prerequisite: DSCI 921 or consent of instructor. LEC.

DSCI 923 Statistics for Business Research (6). (V) This course covers the theory of statistics and its use for research in the business disciplines. The course is designed primarily for Ph.D. students in the School of Business. Prerequisite: DSCI 920. LEC.

DSCI 924 Seminar in Probability and Statistics: _____ (1-6). Individual study of selected current problems in probability and statistics with application to various business disciplines. Topics covered may vary and will depend on the instructor. Examples of topics that may be covered are time series models, stochastic processes, uncertainty in artificial intelligence, multivariate statistics, etc. Prerequisite: DSCI 920 and DSCI 921, or consent of instructor. LEC.

DSCI 925 Doctoral Seminar in Decision Sciences: _____ (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC.

DSCI 926 Directed Research in Decision Sciences: _____ (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC.

DSCI 934 Seminar in Probability and Statistics: _____ (3). (V) This course will cover advanced topics in probability and statistics with application to various business disciplines. Topics covered may vary and will depend on the instructor. Examples of topics that may be covered are time series models, stochastic processes, uncertainty in artificial intelligence, multivariate statistics, etc. Prerequisite: DSCI 920 and DSCI 921, or consent of instructor. LEC.

DSCI 938 Management Research Seminar (1). The seminar will discuss current research in management science topics such as artificial intelligence, statistics, optimization, decision making, computer systems, and management of operations. Topics covered will reflect the research interests of the instructor and participants. Participants are required to lead the discussion for at least one paper of their choice. Graded on a satisfactory/unsatisfactory basis. LEC.

DSCI 995 Doctoral Seminar in Decision Sciences: _____ (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC.

DSCI 997 Directed Research in Decision Science (1-5). Students will research selected topics in the field of business administration under the direction of a graduate faculty member, and in so doing, conduct and disseminate through publication a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. Prerequisite: Approval required from supervising graduate faculty member. RSH.

DSCI 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business administration to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Student must submit written statement of proposed project. Prerequisite: Approval required from supervising faculty member and Ph.D. Team. RSH.

Entrepreneurship Courses

ENTR 701 Introductory Accounting and Finance for Entrepreneurs (3). This course introduces the non-business student to the language of business, accounting, and its applications in the introduction of small businesses. Students will learn how to account for the various activities of the start-up and early stage new venture as well as the importance, utility and construction of financial statements. Further, students will acquire the ability to construct financial projections for a start-up firm and monitor the financial performance of the growing business with a focus on cash flow management. Finally, students will be introduced to various remedies that are available to entrepreneurs that do not meet projections. Prerequisite: Admission to Graduate Studies. Enrollment restricted. LEC.

ENTR 702 Introduction to Entrepreneurship (3). In this course the student examines the disciplines which comprise the critical success factors in entrepreneurship and develops the fundamental skills needed to start and run a venture. Students will learn how to evaluate business opportunities via Feasibility Analysis which encompasses identifying a market opportunity and developing an effective business plan. Students will also develop a new venture, building a developing an effective marketing plan, assessing the new venture’s financial strengths and preparing the proper ethical and legal foundation for the new business. Finally, upon completion of the course the student will possess a beginning comprehension for getting financing for the new venture and preparing for the challenges of business growth. Prerequisite: Admission to Graduate Studies. LEC.

ENTR 703 Experimental Business Plan Development (3). Upon successful completion of this course, the student will be able to evaluate a business concept and write a sound business plan. In the process of doing so, students will be able to assess the strengths and weaknesses of a business concept, collect, analyze and organize market research data into a marketing plan; and prepare the financial projections for their business concept. In addition, students will be able to identify and evaluate various resources available for funding small businesses. Integral to the learning of this course, each student will prepare a summary business plan based on his/her idea for a new business opportunity. The completed plan will be automatically entered into the Mark L. Morris, Jr. New Venture Award Competition. (V) Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. LEC.

ENTR 895 New Venture Development (3). This course will focus on identifying and evaluating the business opportunity, the strategies to be developed and implemented as well as entrepreneurial capabilities required for marketplace success. Development of a robust and compelling business concept will be emphasized. Analyses of the industry, competition, the new business plans of strategic advantage, creation of an effective business model and funding strategies will be studied. Financing the new venture, sourcing and structuring the required capital will be explored and attention will be given to managing rapid growth including the development of strategies for survival. Prerequisite: ENTR 701 and ENTR 702. LEC.

ENTR 995 Doctoral Seminar in Entrepreneurship: _____ (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC.

ENTR 898 Independent Study for Master's Students (1-6). Individual study of selected current problems in the field of entrepreneurship to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH.

Finance Courses

FIN 701 Financial Management (2). This course provides an overview of the problems associated with the financial management of new and small business ventures making it possible to identify the financial opportunities available for small business ventures and the potential risks associated with the financial management of small businesses. The course includes an introduction to the basic principles of financial management. Prerequisite: ACCT 701. LEC.

FIN 705 Investment Theory (2). This course provides a framework for describing the markets in which securities are traded, their determinants, and their valuations. The development and use of the theoretical models, student gain an understanding of the methods and techniques utilized by the professional investor and portfolio manager. Not open to students with credit in FIN 410. Prerequisite: FIN 701 or consent of instructor. Enrollment restricted. LEC.

FIN 706 Investment Analysis (2). This course emphasizes the applications aspects of investments. Various valuation methods are applied to securities of different types with emphasis on bonds, common stocks, options and futures. Case studies are often used to convey key concepts and strategies. Not open to students with credit in FIN 410. Prerequisite: FIN 705 or consent of instructor. Enrollment restricted. LEC.

FIN 710 Analysis of Financial Intermediaries (2). This course focuses on the principles of theoretical and practical controversies in the area of financial institutions. Contemporary issues facing these institutions in conjunction with historical and evolutionary developments are a hallmark of the course. Not open to students with credit in FIN 430. Prerequisite: FIN 701. LEC.

FIN 715 Real Estate Investment Analysis (2). This course stresses the practical applications of real estate analysis that can be drawn from theoretical foundations to assist the real estate manager in long-range planning. Particular emphasis is placed on real estate valuation, financing, conveyance, tax consequences of ownership and the role of government in real estate. Prerequisite: FIN 701. LEC.

FIN 725 Business Valuation (3). Apply finance principles to measure and manage the value of companies using three fundamental approaches. Students will estimate free cash flows, economic value added, and cost of capital. They also forecast accounting statements, compare absolute and relative valuation techniques, and evaluate restructuring opportunities and corporate acquisitions. Not open to students with credit in FIN 400/417 Business Valuation. Prerequisite: FIN 701. (Recommended: FIN 745 and FIN 746). Enrollment restricted. LEC.

FIN 730 Applied Portfolio Management (4). This course provides the student with practical portfolio experience and closely follows market changes and actively manages an endowment account for the benefit of the University and the School of Business. Experienced
FIN 735 International Finance (2). The economic determinants of exchange rates are discussed. This is followed by an examination of the financing problems faced by the multinational corporation and the international portfolio manager, arising from the multinationalization of their entity. These topics can include credit, forward, futures, and options markets in foreign currency, international risk management, purchasing power parity, interest rate parity, covered interest arbitrage, and contemporary issues in international financial management. Prerequisite: FIN 701 and BE 702 or permission of instructor. LEC

FIN 740 Forwards, Futures, and SWAPS (2). This course examines the use of forwards, futures, SWAPS, and related financial derivatives for hedging, arbitrage, and speculative purposes in the global environment. The course focuses on understanding how firms can manage interest rate risk, exchange rate risk, and commodity price risk using these derivatives. The emphasis is on understanding the motivation, mechanics, valuation, and management techniques behind financial engineering with these derivatives, as practiced by firms and individuals to maximize value in global markets. Prerequisite: FIN 701. LEC

FIN 741 Options (2). This course examines the use of options and related financial derivatives for hedging, arbitrage, and speculative purposes in the global environment. The course focuses on understanding how firms can manage interest rate risk, exchange rate risk, and commodity price risk using these derivatives. The emphasis is on understanding the motivation, mechanics, valuation, and management techniques behind financial engineering with these derivatives, as practiced by firms and individuals to maximize value in global markets. Prerequisite: FIN 701. LEC

FIN 745 Business Investment (2). This course is focused on the evaluation of fixed asset investment opportunities. Important topics are: cash flow analysis, estimation of required rates of return, risk analysis, and long-term investment analysis. Not open to students with credit in FIN 468. Prerequisite: FIN 745 or consent of instructor. Enrollment restricted. LEC

FIN 750 Entrepreneurial Finance I (2). The course focuses on valuing and financing young, high-growth potential private companies. A mixture of lectures and cases is used to expose students to various topics in entrepreneurial finance. Topics include identifying good opportunities, placing a quantitative value on these opportunities by using different valuation techniques (discounted cash flows, relative valuation, and the Venture Capital method), overview of the venture capital (VC) industry, VC contracting, analysis of term sheets, raising capital from angel investors and corporate venture capitalists. Prerequisite: FIN 701. LEC

FIN 751 Entrepreneurial Finance II (2). The course focuses on valuing and financing young, high-growth potential private companies. A mixture of lectures and cases is used to expose students to various topics in entrepreneurial finance. Topics include financing start-ups through private debt and government sources, mezzanine financing, using alliances and strategic partnerships, overview of venture capital in developed countries and emerging markets, harvesting the new ventures through an initial public offering, merger, or a buyout, and the challenges associated with each exit venue. Prerequisite: FIN 701. LEC

FIN 760 Risk Analysis (2-3). An introduction to the concepts, methodologies, and applications of risk analysis and modeling. The course will develop practical modeling skills with spreadsheet software. To accomplish this, material from across the finance discipline will be covered. Examples from corporate finance, investments, financial derivatives, real estate, and personal finance will be used to demonstrate modeling. Prerequisite: DSCI 701 and FIN 701. Enrollment restricted. LEC

FIN 795 Special Topics in Finance: (2-5). A variable-topic course open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC

FIN 895 Graduate Seminar in Finance: (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC

FIN 898 Independent Study for Master’s Students: (3). Individual study of selected current problems to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH

FIN 918 Macroeconomics for Research in Business (3). This course is designed primarily for doctoral candidates in business administration. The basic Classical and Keynesian models are introduced and refined. Topics on government policy and foreign trade are covered. Concentration is placed on the role of monetary, fiscal, and trade policies, and the dialogues concerning stabilization policy, the unemployment-inflation tradeoff, wealth effects, rational expectations, and international policy issues. The focus is on a comparative analysis of the United States, Japan, and the European Community. Prerequisite: COS 522 and MATH 115 and (MATH 116 or MATH 121), or consent of instructor. LEC

FIN 937 Seminar in Business Finance (3). This course is designed to develop the students’ analytical abilities. Course material is of a theoretical and empirical nature. Advanced topics in financial management of business firms are covered. Special emphasis is given to long-term financing topics. Prerequisite: FIN 705 (BUS 751) and FIN 706 (BUS 752), or consent of instructor. LEC

FIN 938 Seminar in Investments (3). A study of advanced topics in investments, capital markets, and portfolio theory. Special emphasis is given to the theory of efficient markets. The course is designed to cover recent analytical and empirical literature in the investment area. Prerequisite: FIN 937 or consent of instructor. LEC

FIN 995 Doctoral Seminar in Finance: (2-5). A variable topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

FIN 997 Directed Research in Finance (1-5). Students will research selected topics in finance under the direction of a faculty member. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. Prerequisite: Approval required from supervising faculty member. RSH

FIN 999 Independent Study for Doctoral Students (1-6). Individual study of selected current problems in the field of business administration to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Student must submit written statement of proposed project. Prerequisite: Approval required from supervising faculty member and Ph.D. Team. RSH

FIN 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

Information Systems Courses

IST 701 Managerial Information Systems (2). This course provides a broad, managerial overview of information systems and their role in organizations and individuals to successfully leverage information systems assets in a business setting. Prerequisite: FIN 701 (BUS 751) and (MATH 116 or MATH 121), or consent of instructor. Enrollment restricted. LEC

IST 702 Systems Development (3). This course focuses on the practical issues of system development. A main objective of the course is to teach students system development through programming projects. In addition, the course will introduce engineering issues involved in system development, including usability and design issues, and alternative approaches to system development processes. To enhance the quality of the system developed, the course also looks into software testing and evaluation issues. Prerequisite: IST 701 or consent of instructor. Enrollment restricted. LEC

IST 704 Database Management (3). This course provides insight to the managerial and organizational issues that surround the development and implementation of database systems in organizations. Students will undertake a project that allows them to experience the database development process while learning and practicing modern data modeling techniques. Students will also study the value that databases have to the organization and the impact that databases have on decision-making processes. Students also will study strategic issues that impact database development and will research the latest advances in database management systems and other emerging technology to gain insight on how these advances will impact the future of database development. Prerequisite: IST 301 or IST 701. Enrollment restricted. LEC

IST 706 Systems Analysis and Design (3). This course develops skills with regard to developing and managing systems in an organizational environment. The course will introduce student to practical planning, analysis and design techniques, including Project Estimation Methods, Data Flow Diagrams, Entity-Relationship Diagrams, and Conceptual Modeling (UML/Software Engineering Tools). The teaching methods will combine classroom experience with an analysis and design case study using role-play techniques to simulate an actual analysis and design scenario. Prerequisite: IST 301 or IST 701. Enrollment restricted. LEC

IST 708 Strategic Information Systems Planning (3). This course has two objectives. The first objective is to give graduate students an understanding of the need for high level IT strategy in organizations. This is accomplished through case analysis, the experiential learning of strategic concepts and through interaction with IT executives. IT strategy is explored at the executive levels of an organization. The second objective of the course is to give students experience working on projects/research and presenting materials as is done in developing IT strategy for real organizations. Prerequisite: IST 301 or IST 701. Enrollment restricted. LEC

IST 710 Business Computer Networking (3). This course exposes graduate business students to the technical and managerial aspects of business networking. The course will provide students with a foundation in networking concepts and relevant technologies. At the same time, discussions on utilizing networking in business applications are also covered. Networks will be a major component of the course. Use cases and outside readings to focus on key network management issues and to present emerging network technologies. Conceptual learning is supported by selected hands-on activities in the lab. Prerequisite: FIN 701. Enrollment restricted. LEC

IST 712 Information Security (3). This course will introduce, at a managerial rather than a technical level, a range of topics associated with security of information systems and related data in a business environment. Topics addressed include security and access control, encryption, user authentication, user authorization, and the Internet. Prerequisites: COS 522 and MATH 115 and (MATH 116 or MATH 121), or consent of instructor. LEC

IST 715 E-Commerce: An Integrative Perspective (3). This course examines how organizations and individuals exploit the Internet and other emerging information technology tools to achieve their business goals. The course will provide students with a foundation in the business environment, the challenges associated with emerging technologies, and the strategy and tactics that organizations employ to successfully manage their business re-
Business Courses (IST, IBUS)

to conduct business in an information era. This course combines practice and theory to examine selected topics in the field of business administration under the direction of a graduate seminar open only to graduate students meeting the requirements. Prerequisite: IST 301 or IST 701. Enrollment restricted. LEC

IST 720 Developments in Software Technology (3). This course is an introduction to object-oriented (OO) technology and the object paradigm. We explore the object paradigm, its benefits and limitations. Specifically, we study a state-of-art technique for OO modeling. We also apply this technique to the analysis and design of a system, and implement the concepts with OO programming. Students will gain practical experience in OO analysis, design, and implementation through projects with an OO programming language. Prerequisite: IST 701. Enrollment restricted. LEC

IST 725 Contemporary Information Technology Topics (3). This course explores a wide range of innovative information technologies (IT) which have both technical and strategic implications for businesses. These IT innovations affect all functions of businesses. Topics include Web 2.0, Web 3.0, next generation Internet services, social networking technology, virtual world, pervasive computing, ubiquitous computing, unified communications (unification), IT utility, on-demand computing, grid computing, Web services, service-oriented architecture, business intelligence, data mining, search technology and applications (Google), next generation Web search, virtualization (server, hardware), storage fabrics, open source, IT outsourcing, personal technology, health care IT, green IT, security and privacy, Internet policy, regulation, global control, and the gap between IT and business (goals and strategies). Prerequisite: IST 301 or IST 701. LEC

IST 730 IT Project Management (3). This course provides initial exposure to concepts related to the project management discipline generally, while focusing on management of information technology projects in particular. The course is organized to emphasize core project management knowledge areas developed by the Project Management Institute, and it stresses the benefits of a disciplined, formal project management methodology. Students completing the course will gain an appreciation for the complex nature of projects and be better prepared to be an effective member of project teams encountered in many types of organizations. Prerequisites: IST 301 or IST 701. LEC

IST 799 Internship in Information Systems (1-3). Internships provide opportunities for students to combine their academic education with a meaningful experience in the business world. Accounting internships allow students to explore career pathways in accounting, further their professional growth, expand professional networks, and increase the relevancy of their academic coursework. The internship course combines job-related activities of the accounting internship position with the academic requirements. Prerequisites and requirements include academic assignments as well as a pre- and post-internship seminar held in the semester before and after the semester in which the internship occurs. Internships for credit must be approved by the Director of the Internship Program prior to the internship experience. Students may not receive more than three hours of internship credit. Enrollment restricted and by permission only. LEC

IST 895 Graduate Seminar Information Systems: (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC

IST 898 Independent Study for Master's Students (1-6). (V) Individual study of selected current problems in the field of information systems to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH

IST 995 Doctoral Seminar in Information Systems: (2-5). A variable topic seminar open only to graduate students meeting the academic requirements as determined by faculty members offering the course. Prerequisite: Consent of instructor. LEC

IST 997 Directed Research in Information Systems (1-5). Students will research selected topics in the field of business administration under the direction of a graduate faculty member. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graduate faculty must have doctoral faculty status. Prerequisite: Approval required from supervising graduate faculty member RSH

IST 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business administration to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must submit written statement of proposed project. Prerequisite: Approval required from supervising faculty member and Ph.D. Team. RSH

IST 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

IBUS 703 International Business (2). This introductory course aims at providing a framework for understanding the business concepts, principles, and issues involved in international business and economic relationships. Focus is placed on (1) the evolution of the present international monetary and trade systems, with emphasis on the role of the IMF and GATT (now the World Trade Organization); (2) the nature and current transition of former centrally-planned economies; (3) the nature and prospects of less developed countries; and (4) the interdependence of the major industrialized nations (with coverage also of regional integration initiatives). LEC

IBUS 702 International Business Strategy (2). Managing across nation means managing across nations’ cultures, languages, time zones, government regulations, etc. In addition, multinationals (and the more recent phenomenon of off-shoring) are not always viewed in a positive light. International Business Strategy will explore both the benefits and challenges of doing business and the opportunities and risks of doing business. Topics covered include: the analysis of fit between a company, its products and specific international markets; assessing and responding to competitive pressures to hold down costs while adapting to local demands; and optimizing organizational structures to facilitate knowledge location and movement. Case studies are used to develop analytical and decision-making skills and also highlight the reality of environmental uncertainties influencing decision making in the international context. LEC

IBUS 703 Comparative and Cross-Cultural Management (3). This course explores how cultures shape all of its aspects. The course covers organizational practices and performance. We analyze how and why organizational communication and practices vary from one culture to another, as well as how certain values and cultural contexts might make particular management styles more successful than others. We also will examine the interactions between organizational cultures and other factors such as global business (goals and strategies). Prerequisite: IST 701 or IST 703. LEC

IBUS 706 Business Practices in .... (2). This course provides students an opportunity to learn about business in a particular foreign country. Students will travel to the country of interest to visit a variety of companies and organizations, and with their managers to learn about the unique opportunities and challenges faced by companies operating in that country. Company visits will be selected to include both manufacturing and services firms and to reflect a variety of ownership structures (foreign subsidiaries, locally-owned companies, joint-ventures, etc.). Lectures from faculty at an in-country host institution will provide specific information on the local business environment and cultural, historical and institutional context. Prerequisite: Determined for each topic by instructor. RSH

IBUS 720 Business in China (2-3). The course analyzes the unique aspects of the Chinese business environment and the major managerial issues that are likely to confront firms conducting business in the country. The first part of the course reviews China’s economy and culture, and examines its contemporary political structure, economic, financial, social systems, and institutions. The second part of the course examines important strategic and operational issues such as market entry, contract negotiation, supply chain management, marketing strategies and recruitment, and human resource management. Recommended: IBUS 701. Enrollment restricted. LEC

IBUS 721 Business in Latin America (2-3). This course analyzes the business environment of Latin America and the managerial practices that have evolved in this unique context. Using cases, readings, lectures and videos, the course seeks to cover a broad spectrum of the topics covered in other courses. Recommended: IBUS 701. Enrollment restricted. LEC

IBUS 722 Business in India: Understanding the Indian Paradox (2-3). The class will use a mix of lectures, guest speakers, cases and assignments to understand the context and contemporary practice of business in India. Topical industries/issues will be covered in the course. The course deals with the challenges related to consumer diversity, human resources, political environment and infrastructure. Unique Indian business practices and models used in rural marketing and supply chain management will be examined. Enrollment restricted. LEC

IBUS 740 Business Practices in China (2-3). This course provides students an opportunity to learn about business in China by observing it in practice. Students will travel to China to visit a variety of companies and meet with their managers to learn about the unique opportunities and challenges faced by companies operating in China. Company visits will be selected to include both manufacturing and services firms and to reflect a variety of ownership structures (foreign subsidiaries, locally-owned companies, joint-ventures, etc.). LEC

For help finding course descriptions, see the Directory of Courses, pages 7-8.

Information about business studies in Asolo, Italy, through the Consortium of Universities for International Business Studies in Italy is available from (785) 864-7576.

The Harper Computing Classroom has 34 PCs for teaching classes that make heavy use of computers.
Chinese host institution will provide specific information on the local environment, culture, historical sites, and local businesses. Specific prerequisites may be required for a particular offering of this class. LEC

IBUS 741 Business Practices in Latin America (2-3). This course provides students with an opportunity to learn about business in Latin America by observing it in practice. Students will visit multinational enterprises and local companies in the region to meet with their managers to learn about the unique opportunities and challenges faced by companies operating in Latin America. Company visits will be selected to include both manufacturing and services firms and to reflect a variety of ownership structures, sizes, and industry types. The visits are designed to provide students with both practical and theoretical knowledge. Lectures meet from faculty at a Latin American host institution will provide specific information on the local business environment and cultural, historical and institutional context. Specific prerequisites may be required for a particular offering of this class. LEC

IBUS 742 Business Practices in India (2-3). The class will expose you to economic, political and cultural aspects of this growing market and the impact rapid growth and economic transformation are having on Indian businesses. We will visit business and educational institutions, meet with leaders and experts and will make presentations in India. Enrollment restricted. LEC

IBUS 895 Graduate Seminar in International Business: (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC

IBUS 898 Independent Study for Master’s Students (1-6). Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the student and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing. A written proposal must be submitted and approved by a supervisor prior to enrollment. RSH

IBUS 950 Research in International Management and Strategy (3). This seminar surveys the literature, classic and contemporary, that forms the theoretical basis of the international management strategy course. Thought leaders in the field will lead the discussions. Specific prerequisites may be required for a particular offering of this class. LEC

IBUS 727 Strategy Implementation (2). The course will focus on the principles and methods of implementing strategies, both at the business unit and corporate levels. Environmental, technological and competitive changes, however, have led to the development of new frameworks for the design and implementation of strategies. This course will be geared towards providing an understanding of the process of implementing strategies and the different strategies that are available to the strategist. LEC

IBUS 730 Business and Social Problems (3). See the instructor for details. Prerequisite: Completion of MGMT 704 or equivalent

MGMT 725 Management of Technology I: Technology and Strategy (2). Management of Technology I will focus on the role played by technology in the strategic management of firms, both in high technology and low technology industries. The use of technology as a major source of competitive advantage, together with trends in new products and processes, and the impact of technology on organizational forms will be discussed. The concept of technology strategy and the role of value creation will be elaborated. The course will make extensive use of case studies to illustrate the key concepts and issues covered. Covered topics include: industrial organization, strategic group analysis, competition and innovative destruction, innovation and diffusion; Industry evolution and market development triggered by technological developments; Technology-induced organizational and business process changes; and competitive strategy and value chain analysis; Business Processes; core process design; organization of R&D laboratories and new venture departments; IT and reengineering. LEC

IBUS 726 Management of Technology II: Technology and Operations (2). Manage- ment of Technology II: Technology and Operations will focus on the role of technology in management of operations of a company. Research and Development, New Product Development, Operations and the linkages among them will be detailed. Key organizational issues such as business processes, core process designs, and organization of R&D and scientific laboratories will be discussed. Information technology as a source of competitive advantage and changes in information systems will be covered. Topics covered include: R&D, strategy, alliances and management; new product development; QFD, benchmarking, and early manufacturing involvement; methods to speed up cycle time, competitive benchmarking, outsourcing and reengineering; Organizational design and strategic method; and value chain analysis: Business Processes; core process design; organization of R&D laboratories and new venture departments; IT and reengineering. LEC

MGMT 727 Strategy Implementation (2). The course will focus on the principles and methods of implementing strategies, both at the business unit and corporate levels. Environmental, technological and competitive changes, however, have led to the development of new frameworks for the design and implementation of strategies. This course will be geared towards providing an understanding of the process of implementing strategies and the different strategies that are available to the strategist. LEC

MGMT 730 Business and Social Problems (3). See the instructor for details. Prerequisite: Completion of MGMT 704 or equivalent

MGMT 735 Management of Change and Development (3). This course examines the mechanisms that organizations use to respond to and initiate change in their internal and external environments. Specific processes include organization development (OD), intervention theory and research, organizational effectiveness, a variety of proactive change strategies, and the role of the change agent. Prerequisite: MGMT 701. LEC

MGMT 736 Advanced Topics in Management (2). This course will include a study of advanced topics in various subfields of Management of Organizations. The course focus, content, and approach will depend upon the particular topics to be covered. Repeatable for different topics. Prerequisite: Variable. LEC

MGMT 737 Competitive Analysis (3). Competitive Analysis deals with issues of competition and the formulation of competitive strategy towards creating long-term economic value. This course develops a framework for evaluating industry structures and understanding the dynamics of competition. The course will cover a variety of frameworks that can include nature of markets and competition, economic value creation, analysis of industries, customers and competitors, identification of capabilities and core competencies, and other factors that lead to the erosion of competitive advantage. In addition, discussion will center around how firms can achieve “dynamic fit,” developing a self-renewing organization that encourages entrepreneurial behavior critical to the formulation and implementation of value-creating strategies. LEC

MGMT 725 Management of Technology I: Technology and Strategy (2). Management of Technology I will focus on the role played by technology in the strategic management of firms, both in high technology and low technology industries. The use of technology as a major source of competitive advantage, together with trends in new products and processes, and the impact of technology on organizational forms will be discussed. The concept of technology strategy and the role of value creation will be elaborated. The course will make extensive use of case studies to illustrate the key concepts and issues covered. Covered topics include: industrial organization, strategic group analysis, competition and innovative destruction, innovation and diffusion; Industry evolution and market development triggered by technological developments; Technology-induced organizational and business process changes; and competitive strategy and value chain analysis; Business Processes; core process design; organization of R&D laboratories and new venture departments; IT and reengineering. LEC

MGMT 726 Management of Technology II: Technology and Operations (2). Manage- ment of Technology II: Technology and Operations will focus on the role of technology in management of operations of a company. Research and Development, New Product Development, Operations and the linkages among them will be detailed. Key organizational issues such as business processes, core process designs, and organization of R&D and scientific laboratories will be discussed. Information technology as a source of competitive advantage and changes in information systems will be covered. Topics covered include: R&D, strategy, alliances and management; new product development; QFD, benchmarking, and early manufacturing involvement; methods to speed up cycle time, competitive benchmarking, outsourcing and reengineering; Organizational design and strategic method; and value chain analysis: Business Processes; core process design; organization of R&D laboratories and new venture departments; IT and reengineering. LEC

MGMT 727 Strategy Implementation (2). The course will focus on the principles and methods of implementing strategies, both at the business unit and corporate levels. Environmental, technological and competitive changes, however, have led to the development of new frameworks for the design and implementation of strategies. This course will be geared towards providing an understanding of the process of implementing strategies and the different strategies that are available to the strategist. LEC

MGMT 730 Business and Social Problems (3). See the instructor for details. Prerequisite: Completion of MGMT 704 or equivalent

MGMT 735 Management of Change and Development (3). This course examines the mechanisms that organizations use to respond to and initiate change in their internal and external environments. Specific processes include organization development (OD), intervention theory and research, organizational effectiveness, a variety of proactive change strategies, and the role of the change agent. Prerequisite: MGMT 701. LEC

MGMT 736 Advanced Topics in Management (2). This course will include a study of advanced topics in various subfields of Management of Organizations. The course focus, content, and approach will depend upon the particular topics to be covered. Repeatable for different topics. Prerequisite: Variable. LEC

MGMT 737 Competitive Analysis (3). Competitive Analysis deals with issues of competition and the formulation of competitive strategy towards creating long-term economic value. This course develops a framework for evaluating industry structures and understanding the dynamics of competition. The course will cover a variety of frameworks that can include nature of markets and competition, economic value creation, analysis of industries, customers and competitors, identification of capabilities and core competencies, and other factors that lead to the erosion of competitive advantage. In addition, discussion will center around how firms can achieve “dynamic fit,” developing a self-renewing organization that encourages entrepreneurial behavior critical to the formulation and implementation of value-creating strategies. LEC
Business Courses (MGMT)

**MGMT 733 Advanced Methods for Selecting Employees (2)** This course follows logically from MGMT 732 Recruiting and Selecting Effective Employees, and covers advanced personnel selection procedures including the following: background investigation; knowledge, ability, personality, and interest tests; cognitive ability tests; personality assessment; integrity testing; performance tests; assessment centers; drug testing. Prerequisite: MGMT 732. LEC

**MGMT 734 Compensating and Rewarding Employees: Foundations (2)** This course focuses on the development and implementation of compensation and reward systems. The impact of compensation on employee recruitment, retention, and performance is examined. Compensation management practices, including the analysis and evaluation of job, individual wage determination, employee compensation, and pay systems are emphasized. The influence of government and unions on pay practices is also discussed. Prerequisite: MGMT 701. LEC

**MGMT 735 Compensating and Rewarding Employees: Alternative Approaches (2)** The primary focus of this course is on "alternative" compensation and reward systems. After first discussing the factors motivating firms to adopt alternative approaches to pay, these alternative systems will be critically examined. Discussion will focus on: skills/knowledge-based plans; team-based plans; gainsharing/efficiency-based plans; profit-sharing and employee ownership plans; market-based (economic value added) plans; and, alternative recognition systems (e.g., spot bonus plans; non-cash awards). Prerequisite: MGMT 701. LEC

**MGMT 736 Managing People: Applications and Skills (2)** The goal of this course is to increase the capacity of the student to manage others effectively. It begins by focusing on self-awareness and self-management. Students also learn skills for classification of people on the basis of behavior and attitudes. Topics covered may include time management, problem solving, reading people, coaching and counseling, development of the interpersonal environment, motivation, and change. The focus is on skill acquisition and the learning approaches including readings, inventories, role playing and case analysis. Prerequisite: MGMT 701. LEC

**MGMT 737 Training and Developing an Effective Workforce (2)** This course provides an overview of key issues in the process of developing effective training and development programs using both traditional and systems approaches to training. Topics include training needs assessment, methods of training program development and evaluation, and implications for careers. The intent is to provide a student with a practical understanding of operational and strategic issues in human resource development. Prerequisite: MGMT 701. LEC

**MGMT 739 Career Development and Management (2)** This course investigates careers from an individual and organizational perspective with an emphasis on the implications of the current and potential human resource needs, the organizational perspective includes career planning and pathing, the integration of career systems with other human resource programs, and the nature of the employee-employer relationship. The individual perspective includes career management strategies and skills to cope in the workplace, career theories, and balancing work and non-work. Prerequisite: MGMT 701. LEC

**MGMT 740 Appraising and Managing Employee Performance (2)** This course covers the measurement/appraisal of employee performance at the individual and small work group/team level, and the use of appraisal information in both administrative and operating departments. It covers counseling, and individual/team performance improvement. Prerequisite: MGMT 702. LEC

**MGMT 741 International Human Resources Management (2)** This course will focus on human resource strategy, practices, and institutions in different countries, particularly as human resource management and its practices overseas in response to the global market and other environmental forces will be contrasted with that of U.S. firms. Prerequisite: BE 701. LEC

**MGMT 743 Legal Environment for Managing Employees (2)** This course examines the legal environment as it affects the management of employees. The focus is on an understanding of employment law that is needed by all managers rather than human resource specialists. Coverage includes Equal Employment Opportunity legislation, the Americans with Disabilities Act, the National Labor Relations Act, the Occupational Safety and Health Act, and the Fair Labor Standards Act. LEC

**MGMT 744 Managing Human Resources in a Union Environment (2)** This course examines employees in the context of a labor union. The focus is on the creation of mutual gains and the avoidance of an adversary relationship. A major issue is how human resources can be used for a firm's competitive advantage in a union context. Topics covered include strategies for dealing with unions, the negotiation of agreements, productivity enhancement, contract administration, and dispute resolution. LEC

**MGMT 745 Managing Human Resources for Advanced Personnel Selection (2)** This course examines the legal environment as it affects the management of employees. The focus is on an understanding of employment law that is needed by all managers rather than human resource specialists. Coverage includes Equal Employment Opportunity legislation, the Americans with Disabilities Act, the National Labor Relations Act, the Occupational Safety and Health Act, and the Fair Labor Standards Act. LEC

**MGMT 748 Negotiation and Dispute Resolution (3)** This course will include a study of the theoretical foundations of negotiation and the creation of a negotiation learning context. It will focus on the use of alternatives to litigation, such as various forms of arbitration, mediation, and, especially, negotiation. In addition to emphasizing negotiation as a process, the course will also attempt to explore the negotiation process. The major topics covered will be: an introduction to negotiation; an exploration of the negotiation process; appreciation of concepts will be promoted through role play simulations. Not open to students with credit in BLAW 525 or MGMT 525. (Same as BLAW 748.) LEC

**MGMT 780 Special Topics in Management:** (2-5) A variable-topic course open to graduate standing students. Special topics are announced in advance, usually by the instructor. Prerequisite: Permission of the instructor. Enrollment restricted. LEC

**MGMT 785 Business Consulting (4)** Through experiential learning using live consulting assignments, students will achieve understanding clarity of the linkage be-
Theoretical and empirical readings will be drawn from the OB, HR, strategy and other related business courses, e.g., services marketing, to illustrate the following topics: (a) human/social capital and firm success; (b) employee attitudes/behavior and firm success; (c) HR policies/practices and firm success; and (d) contingency perspectives related to position, price, promotion, and distribution. Not open to students with credit in MKTG 411. Prerequisite: ACCT 702 or MKTG 701. Enrollment restricted. LEC MKTG 704 Marketing Research (3). This course can act either as a survey course for the graduate student interested in an introduction to marketing research or as a first course for the student planning to take additional work in marketing research and analysis. Topics include: questionnaire design, data collection methods, descriptive and inferential statistical analysis, data analysis, and report writing. Not open to students with credit in MKTG 415. Prerequisite: ACCT 702 or MKTG 701. Enrollment restricted. LEC MKTG 705 Promotional Strategy (3). This course investigates the marketing communication system primarily from a managerial point of view. The course operates from the premise that the development of any persuasive communications strategy - be it advertising mass communications or personal sales - is best accomplished after an understanding of the basic elements of communication and marketing. Consequently, a good deal of the course will be spent examining the communications process, the nature of the receiver and how information is processed, communications research, and the determination of communications budgets and objectives. Not open to students with credit in MKTG 420. Prerequisite: ACCT 702 or MKTG 701. Enrollment restricted. LEC MKTG 706 Strategic Marketing Planning and Decision Making (3). This course is a capstone marketing course designed around a strategic marketing planning approach with a clear emphasis upon how to do strategic analysis and planning. Methods for the strategic analysis of business units, pricing, promotions, and marketing distribution channels are presented, along with positioning, and new product planning are examples of topics that will be covered. However, the primary course objective is to integrate the various methods and topics into a structured framework that will enable the student to participate in the development of innovative marketing strategies. The course will cover traditional aspects of marketing planning strategies; to translate organizational mission strategies into the marketing plan; and to conceptualize the formulation, integration, implementation, and control of long-range and short-range planning. Not open to students with credit in MKTG 415 or ACCT 702 or MKTG 701. Enrollment restricted. LEC MKTG 708 Global Marketing (3). This course is designed to provide a set of conceptual and managerial tools to students for undertaking marketing of products and services on a global scale. The topics covered in the course include economic and financial dimensions in global marketing, social and cultural aspects of the global market environment, regional market characteristics, international trade theories, political and legal issues in global marketing. A significant portion of the course is devoted to the teaching of both competitive analytical and strategic view of the global markets. The course will consider marketing information systems, various strategies for entering global markets, organization, planning and control of global marketing, and marketing mix decisions (product, price, promotion, placement). The course is open only to students with credit in MKTG 440. Prerequisite: ACCT 702 or MKTG 701. Enrollment restricted. LEC MKTG 709 Sales Force Management (3). In many industries, the sales force is the primary vehicle for taking the product to market. The main objective of this course is to expose students to the concepts, facts, and techniques required to effectively manage this important function. Since the use of personal selling is generally more pronounced within industrial markets, this course will first address issues unique to industrial marketing. Topics here include industrial buying behavior, buyer-seller relationships, marketing strategies, buyer-seller relationships, and managing the pricing function for industrial products. Using this foundation, the next part of the course will cover issues specific to the management of the sales force such as recruiting, training sales force, time management, quota setting, and sales force compensation. Finally, the last part of the course will focus on skills required for professional selling such as handling objections and closing the sales call. Not open to students with credit in MKTG 425. LEC MKTG 710 Internet Marketing (3). The internet and digital technologies continue to profoundly impact all aspects of the marketing function. The broad objectives of this course are to better understand how digital technologies create value for customers and profits for companies. Special emphasis will be placed on new opportunities afforded by digital technologies. Specific topics include personalization, closed-loop marketing, online communities, new pricing formats, harnessing dispersed competence, and formulating win-win marketing strategies. Not open to students with credit in MKTG 450. Prerequisite: MKTG 701. Enrollment restricted. LEC MKTG 711 Pricing Strategies and Tactics (3). This course is designed to expose students to the various viewpoints that govern pricing. After introducing pricing as an integral part of the marketing decision process, the course will develop an understanding of the various tools (for example, consumer behavior and game theory) used to arrive at competitive pricing strategies. Cases will be used to illustrate both the tools and resulting strategies. Illustrative topics include: value-based pricing, price matching guarantees, predatory pricing, behavioral pricing, interaction pricing, and pricing with channel discounts. Throughout the course, various methods, care will be taken to differentiate long-term strategies and short-term tactics used by firms. Overall, students will be able to create effective pricing strategies and also understand how pricing policy fits into the overall marketing function. Not open to students with credit in MKTG 453. Prerequisite: MKTG 701. Enrollment restricted. LEC MKTG 712 Services Marketing (3). Unique characteristics associated with services (e.g., intangibility, perishability, and real-time production) necessitate use of a different set of constructs and understanding from other forms of entrepreneurship. This broad course is designed to fill the knowledge-gap between managing products and managing services. Sample topics covered in this course include managing customer expectations, customer satisfaction measurement, managing service demand, mobilizing people for breakthrough service, managing service recovery, and other related topics. The course examines the marketing function of the firm, primarily from a managerial perspective. The topics examined include: marketing concepts, segmentation, and decision models related to position, products, pricing, distribution, and promotion. LEC MKTG 701 Marketing Management (2). This course examines the marketing function of the firm, primarily from a managerial perspective. The topics examined include: marketing concepts, segmentation, and decision models related to position, products, pricing, distribution, and promotion. LEC MKTG 702 New Product Management (3). This course is designed to develop an understanding for the need for a disciplined process of development, and to follow the basic steps of opportunity identification, testing, and implementation. It deals with the strategies, techniques, and methods used to develop and market a new product or service. The emphasis is on “learning by doing.” The course will focus on the enhancement of innovative thinking, the identification and development of new product ideas, and the identification of marketing strategies associated with the new product. Not open to students with credit in MKTG 430. Prerequisite: ACCT 702 or MKTG 701 or permission of instructor. Enrollment restricted. LEC MKTG 703 Consumer Behavior (3). A course designed (1) to review behavioral science concepts related to position, products, pricing, distribution, and promotion, the specific processes of consumer decision-making and purchasing, and (3) to discuss the research applications of behavioral science concepts to marketing problems. Topics include: environmental influences on the consumer’s evaluation, perception, information processing, attitude, purchasing processes, post-purchase evaluation and related theories. Not open to students with credit in MKTG 411. Prerequisite: ACCT 702 or MKTG 701. Greatly reduced fees. LEC
relationship marketing, customer lifetime value analysis, and managing services in a global context. Not open to students with credit in MKTG 445. Prerequisite: MKTG 701. Enrollment restricted. LEC

MKTG 713 Database Marketing (3). This course introduces the theory and practical implementation of customer relationship management (CRM) strategies using marketing databases. Topics include: fundamentals of CRM strategy, RFM analysis, LTV metrics, logit models, decision trees, techniques for evaluating model performance (e.g., lift charts, ROC) and applications to campaign management. In keeping with the hands-on nature of the course, students will be instructed on how to implement analytical tools such as conjoint analysis, multi-dimensional scaling, questionnaire construction, and causal indicators of constructs, scale development and testing, reliability and validity issues, and design of complex lab and field experiments. The goal of the course is to equip students with measurement tools to conduct research in academic and applied settings. Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 895 Graduate Seminar in Marketing: _____ (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Enrollment restricted. LEC

MKTG 898 Independent Study for Master's Students (1-6). (V) Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH

MKTG 950 Advanced Marketing Research (3). This course deals with measurement tools typically used in marketing such as conjoint analysis, multi-dimensional scaling, questionnaire construction, and causal indicators of constructs, scale development and testing, reliability and validity issues, and design of complex lab and field experiments. The goal of the course is to equip students with measurement tools to conduct research in academic and applied settings. Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 951 Consumer Behavior (3). This seminar provides an overview of the current theories and methodological approaches associated with consumer behavior research. Main topics of the course include attention and information search, consumer memory structure, consumer knowledge, inference making, motivation/goal, consumer attitude and persuasion, judgment and decision making, self-perception and regulation, culture's influence on consumer behavior, and affect/emotion/mood. The content will be based on literature from multiple disciplines including marketing, psychology, sociology, and economics. Students will be required to critically analyze and synthesize the literature, with a view to formulate research proposals on issues that interest them. Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 952 Introduction to Marketing Models (3). The primary objective of this course is to gain an appreciation for modeling marketing phenomena from a decision support perspective. Emphasis will be placed on reviewing a broad range of topics, with a view to understanding the model building process across a wide variety of contexts. In addition, although marketing models include both verbal models and mathematical models, the emphasis will primarily be on the latter. Illustrative research questions analyzed include: How should a firm design incentives for salespeople? Should a firm sell its products individually or in bundles? How can a firm best respond to increased retail pass through? Does it pay to be first to market? Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 953 Marketing Communications (3). This course focuses on fundamentals of marketing communications with a heavy emphasis on message-memory. Some of the topics covered in this course include memory structures and measures, resistance to persuasion, persuasibility, and cumulative advertising, mere exposure effects, effect of syntactic complexity on message effectiveness, working memory deficits and multimedia presentations, memory interference and brand dilution, resistance to persuasion, mood and memory, memory interference and memory for print messages, communicating with audiences with working memory deficits (e.g., elderly adults), and communicating with bilingual consumers. Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 954 Pricing and Strategy (3). This seminar exposes students to the various analytical approaches to understand and model pricing phenomena by examining the classic as well as contemporary works on pricing. The students will learn how to model strategic interactions in the marketplace using game theory and other analytical tools as well as theories such as auction theory, prospect theory, and mental accounting. Some of the topics covered in this course include price discrimination mechanisms, price as a competitive tool (e.g., entry deterrence), price as a promotional strategy, role of price in channel structure and strategy, and effect of price on consumer choice. Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 955 Product Management (3). This course focuses on understanding products and the product development process. Readings are drawn from the literature in marketing, management, decision theory, and psychology. Some topics covered in the course include creation and diffusion of innovations, modeling consumers' perceptions and preferences, brand equity and branding, entry order, sales forecasting, and global product development. Prerequisite: Admission to the Doctoral Program or graduate standing and permission of the instructor. LEC

MKTG 956 Doctoral Seminar in Marketing: _____ (2-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

MKTG 997 Directed Research in Marketing (1-5). Students will research selected topical issues in marketing and be in good academic standing in a graduate business program and must be in good standing and permission of the instructor. LEC

MKTG 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business administration to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Student must submit written statement of proposed project. Prerequisite: Approval required from supervising graduate faculty member. RSH

MKTG 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

Supply Chain Management Courses

SCM 701 Introduction to Supply Chain Management (2-3). This course introduces the principles and practices for designing and managing integrated supply chain operations, focusing on the flow of products, services, information, and funds between firms. The interrelationships among customer service, supply management, inventory management, transportation, and logistics are investigated. Prerequisite/Co-requisite: DSCI 701. LEC

SCM 702 Procurement and Supplier Management (2-3). This course involves the study of supply management. Topics covered include the purchasing process, the role of the procurement function within the company, and the evaluation, selection, and development of suppliers. The course is also designed to emphasize the importance of negotiation and managing contracts. Prerequisite: SCM 701. Enrollment restricted to Fort Leavenworth officers. LEC

SCM 703 Transportation, Logistics Systems (2-3). This course discusses the area of physical distribution management of supply chains. Attention is given to managerial and analytical tools such as distribution systems, inventory management, warehousing, packaging and materials handling. Prerequisite/Co-requisite: SCM 701. Enrollment restricted to Fort Leavenworth officers. LEC

SCM 704 Information Systems for Supply Chain Management (2-3). This course provides an introduction to Enterprise Resource Planning (ERP) systems. We will evaluate the functions processes and data requirements of business functions in an integrated framework. The objectives of the course include (1) understanding data needs of different business functions; (2) understanding of alternative information systems solutions and the problems in independent information systems and; (3) understanding (ERP) systems as solution to integration. Prerequisite: SCM 701. Enrollment restricted to Fort Leavenworth officers. LEC

SCM 710 Capstone in Supply Chain Management (2-3). Integrating and applying the theories, concepts, and methods taken in previous supply chain management courses through the use of readings, case studies, project and industry speakers. Prerequisite: SCM 701. Enrollment restricted to Fort Leavenworth officers. LEC

SCM 895 Graduate Seminar in Supply Chain Management: _____ (0.5-5). A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. LEC

Some departments do not offer all courses in any one semester. See the online Schedule of Classes at www.registrar.ku.edu for current course offerings.

M.B.A. students may choose a concentration option in an area of business that fits their own interests and goals.

The Wagon Microcomputer Laboratory offers 46 computers and 30 software programs to business students.
School of Education

Contents

Admission ................................................................. 88
Program Areas ............................................................ 88
Special Programs & Facilities ...................................... 88
  Applied Physiology Laboratory & Fitness Evaluation Clinic ... 88
  Beach Center on Disability ......................................... 88
  Center for Economic Education .................................... 88
  Center for Educational Testing & Evaluation .............. 88
  Center for Psychoeducational Services ....................... 89
  Center for Research on Learning ................................ 89
  Kinesiology/Biomechanics Laboratory ......................... 89
  Learning Resource & Technology Center .................... 89
  Microcomputer Laboratories ..................................... 89
  South Central Regional Technology in Education Consortia . 89
  Special Education Clinical Programs ......................... 89

Master’s Degree Programs ........................................ 89
  Master of Arts ..................................................... 89
  Master of Science ................................................. 89
  Master of Science in Education ................................. 90

Specialist in Education .............................................. 90

Doctoral Degree Admission Policies ...................... 90

Doctor of Education ................................................ 90
  Advisory Committee ............................................. 90
  Requirements ..................................................... 90
    1. Time Limit ...................................................... 90
    2. Period of Continuous Study ................................. 90
    3. Hours Beyond Master’s Degree ......................... 91
    4. Core Requirement ........................................... 91
    5. Research Skills .............................................. 91
    6. Doctoral Practicum Enrollment ......................... 91
    7. Comprehensive Examination ............................. 91
    8. Dissertation Committee & Proposal .................. 92
    9. Continuous Enrollment .................................... 92
   10. Dissertation .................................................. 92
   11. Final Oral Examination .................................... 92
   12. Dissertation Copies ....................................... 92

Ph.D. with a Major in Education ............................ 92
  Advisory Committee ........................................... 93
  Requirements ...................................................... 93
    1. Time Limit ...................................................... 93
    2. Resident Study ............................................... 93
    3. Program Area ................................................ 93
    4. Core Requirement .......................................... 93
    5. Teaching Experience ........................................ 93
    6. Research Skills ............................................. 93
    7. Comprehensive Examination ............................. 94
    8. Dissertation Committee & Proposal .................. 94
    9. Continuous Enrollment .................................... 94
   10. Dissertation .................................................. 94
   11. Final Oral Examination .................................... 94
   12. Dissertation Copies ....................................... 95

Licensure: Added Endorsements ............................... 95

Curriculum & Teaching .......................................... 95
  Programs ............................................................ 95
  Admission ........................................................ 95
  Curriculum & Teaching Courses ............................. 96

Educational Leadership & Policy Studies ............... 100
  Programs .......................................................... 100
    Admission ....................................................... 100
  Master’s Degree Programs ..................................... 100
  Doctoral Degree Programs ..................................... 100
  Educational Administration ................................... 100
  Foundations of Education .................................... 100
  Higher Education ............................................... 101
  Policy Studies ................................................... 101
  Educational Leadership & Policy Studies Courses 101

Health, Sport, & Exercise Sciences ...................... 103
  Admission .......................................................... 103
  Master of Science in Education Degree Programs 103
  Doctoral Degree Programs ..................................... 104
  Research Skills ................................................... 104
  Laboratories & Facilities ...................................... 104
  Health, Sport, & Exercise Sciences Courses ............. 104

Psychology & Research in Education .................... 107
  Prerequisites for Regular Admission ......................... 107
  Counseling Psychology Programs ............................ 107
  M.S. in Counseling Psychology ............................... 108
    Admission ....................................................... 108
    Program Requirements ....................................... 108
  Ph.D. in Counseling Psychology .............................. 108
    Admission ....................................................... 108
    Review of Graduate Status .................................. 108
    Course Work Requirements ................................ 108
    Comprehensive Examination ............................... 109
    Internship ...................................................... 109
    Dissertation .................................................... 109
  Educational Psychology & Research Programs ............ 109
    Admission ....................................................... 109
    M.S.Ed. in Educational Psychology & Research ........ 109
      Program Requirements ..................................... 109
      Course Work Requirements ............................... 109
    Ph.D. in Educational Psychology & Research .......... 109
      Course Work Requirements ............................... 110
      School of Education Core Requirements ............... 110
      Research Skills ............................................. 110
      Comprehensive Examination ............................ 110
      Dissertation .................................................. 110
      School Psychology Programs ............................. 110
        Admission .................................................... 110
        Ed.S. in School Psychology ............................. 110
          Program Requirements ................................ 110
        Ph.D. in School Psychology ............................. 110
          Research Skills ......................................... 111
          Comprehensive Examination ......................... 111
          Internship ................................................ 111
          Dissertation .............................................. 111
          Course Work Requirements .......................... 111
          Psychology & Research in Education Courses .... 111

Special Education ............................................... 114
  Admission ......................................................... 115
  Master of Science in Education Degree Program ....... 115
  Doctoral Degree Programs ..................................... 115
    Doctor of Education ......................................... 115
    Doctor of Philosophy ........................................ 115
    Special Education Courses .................................. 115

See pages 12-13 for admission procedures.

KU is noted for innovative research in learning disabilities, training of deaf children, special education services in rural areas, and the use of computers to teach children.

School of Education degree requirements are subject to change. Current information is available from department offices or online at www.soe.ku.edu.
Further information on graduate study may be found in departmental sections of this catalog. For information about visual art education, see the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog. For information about music education and music therapy, see the School of Music chapter of this catalog.

Most graduate students are expected to complete work in education areas other than their program areas, as well as in liberal arts or other noneducation areas. The amount of such work depends on the degree sought and the major area. A student must be enrolled for the period during which the comprehensive or final examination is taken. Full-time graduate student enrollment in the School of Education is 9 graduate credit hours or the equivalent.

Special Programs and Facilities
The School of Education provides these programs and facilities for students, faculty, and, in many cases, the public. Most facilities offer graduate students opportunities for assistantship, laboratory, and research experiences related to their programs of study. Contact the individual programs for information.

Applied Physiology Laboratory and Fitness Evaluation Clinic
This teaching and research laboratory in stress physiology, Robinson Center, 1301 Sunny Cove Ave., Room 101, Lawrence, KS 66045-7520, assesses physical function through physiological tests. Fitness parameters of physical education majors and students in health, sport, and exercise sciences classes are assessed routinely. Demonstrations of physiological and biochemical concepts are performed for exercise physiology classes. Research on the physiological ramifications of exercise stress is conducted. Graduate and undergraduate students assist in service and research projects.

Beach Center on Disability
The Beach Center, Haworth Hall, 1200 Sunny Cove Ave., Room 3111, Lawrence, KS 66045-7566, is funded by the National Institute for Disability and Rehabilitation Research, Office of Special Education and Rehabilitative Services, U.S. Department of Education. It is the only federally funded center in the nation conducting research with families with members with disabilities. The center is involved in research and training projects addressing family well-being across the life span. Projects are guided by six fundamental beliefs about families: positive contributions, great expectations, full citizenship, choices, inherent strengths, and relationships.

Center for Economic Education
The center, 431 Joseph R. Pearson Hall, works to increase the economic literacy of pre-service and in-service teachers through credit and noncredit teaching and consultation in economic education. It maintains a library of current materials on economic/consumer education.

Center for Educational Testing and Evaluation
The center, 735 Joseph R. Pearson Hall, engages in research and service in educational assessment and program evaluation. Issues in educational testing are studied and projects are designed and carried out to examine school effectiveness, person-
nel/student evaluation, and policy implications of educational testing and assessment. There are opportunities for assistantships for interested and qualified students.

**Center for Psychoeducational Services**

CPS, 130 Joseph R. Pearson Hall, is a training site for students in the Department of Psychology and Research in Education. CPS is staffed by student clinicians in school psychology and counseling psychology who earn credit while they gain practical experience working directly with clients. CPS is a self-sustaining, nonprofit agency.

**Center for Research on Learning**

The center, 517 Joseph R. Pearson Hall, conducts research to enhance learning and performance in school and nonschool settings. The center’s international network trains educators to use the products of its research. It serves as the parent organization for four research institutes: the Institute for Effective Instruction, the Division of Adult Studies, the Advanced Learning Technologies group, and the e-Learning Design Laboratory.

**Kinesiology/Biomechanics Laboratory**

The laboratory, Robinson Center, 1301 Sunnyside Ave., Room 101, Lawrence, KS 66045-7520, analyzes human motion. The primary emphasis is on computer-aided cinematographical analysis, but other research tools such as electromyography (EMG), electrogoniometry, stroboscopy, and force plates are used. Major attention is given to the study of efficient movement techniques, equipment design, strength, flexibility, and body types.

**Learning Resource and Technology Center**

The center, 110 Joseph R. Pearson Hall, serves faculty and students of the school and the public. Its resources include the Curriculum Laboratory, professional books and journals, K-12 textbooks, curriculum guides and course outlines from school districts throughout the country, selected reference and reserve materials, and mediated instructional packages for pre-service and in-service teacher education. It supports teaching, research, and service involving educational applications of media and microcomputers. Teacher education students develop skills in operating media equipment and producing materials to support their teaching. A representative cross section of instructional equipment found in schools is available, along with emerging technologies used in distance learning and interactive video instruction. The center offers production support for instructional materials and research support for design, evaluation, use, and dissemination of instructional technology.

**Microcomputer Laboratories**

Microcomputer laboratories in Joseph R. Pearson Hall and Robinson and Dole Centers prepare students to use computers in administrative, instructional, and research applications. The laboratories offer a range of equipment found in schools, including PC and Macintosh computers. Computers are networked to KU’s backbone and resources such as scanners, laser printers, CD-ROM, CD, and DVD players. The laboratories contain application, programming, data management, data analysis, and instructional software that can be used for all grade levels and disciplines.

**South Central Regional Technology in Education Consortia**

SCR*TEC is one of six federally funded R*TEC’s with the mission of improving student performance by integrating advanced technologies into educational activities. It serves 6 million students and nearly 400,000 teachers in the five-state region. It addresses issues of learning through Web-based resources, tools, and activities for teachers and students. SCR*TEC is part of the Advanced Learning Technologies group, a division of the Center for Research on Learning.

**Special Education Clinical Programs**

The Department of Special Education in Lawrence, Joseph R. Pearson Hall, 1122 W. Campus Road, Room 521, Lawrence, KS 66045-3101, gives students the opportunity to observe and participate in instructional and research activities. Staff and students from such professional areas as psychology, applied behavioral science, social work, speech, music therapy, occupational therapy, and physical therapy offer a rich multidisciplinary opportunity for special education and other students.

**Master’s Degree Programs**

Master’s degrees are granted on satisfactory completion of not less than one academic year, or its equivalent, of graduate study. The school provides three options for the master’s degree: the thesis option, the project option, and a minimum 36-graduate-credit-hour study option. At least 20 of the credit hours required for master’s programs must be in regular course work, as contrasted with independent study and similar enrollments. Students pursuing the 36-hour program option must have 26 hours in regular course work. All master’s programs require a graduate class in research and evaluation methods, successfully completed during the first 12 hours. As part of the requirement for the degree, the candidate must pass a final oral or written examination. A candidate’s adviser and two additional members of the Graduate Faculty constitute the examining committee for the thesis or project options. The department prepares and evaluates the written examination for the credit-hour degree option.

To ensure continuity of progress and currency of knowledge, there is a seven-year time limit for completion of master’s degree requirements. The Graduate Division has the authority to grant a one-year extension for compelling reasons, on recommendation of the department committee. If more than eight years are requested, the appropriate appeals body of the school considers petitions for further extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions.

**Master of Arts**

A candidate for the Master of Arts degree completes work both in education and in a teaching area (other than physical education). For students who choose the thesis or project option, a minimum of 30 hours of graduate credit is required for this degree, of which no fewer than 10 and no more than 15 hours must be earned in the teaching area. Some work must be elect in at least two of the approved graduate program areas in the School of Education. The candidate must complete a thesis related to the teaching area (6 hours maximum credit applicable to degree requirements) or complete the nonthesis option by enrolling in Master’s Project (4 hours applicable to degree requirements). While enrolled, the candidate submits a research paper related to the teaching area to the adviser. Check with the department for specific course requirements for the 36-hour master’s degree option.

**Master of Science**

A candidate for the degree of Master of Science in Counseling Psychology earns a concentration in mental health counseling. A minimum of 30 credit hours is required for this degree, of which no fewer than 10 hours must be in the concentration. In most cases, additional credit hours are required.
Master of Science in Education

A candidate for the degree of Master of Science in Education selects one of the program areas as a concentration for graduate study. A minimum of 30 credit hours is required, of which no fewer than 10 hours must be in the concentration. Credit in Thesis or Master’s Project may not be included in these 10 hours. The candidate must elect course work in at least two graduate program areas outside the major concentration. Normally, these courses would be in the School of Education. The candidate must complete a thesis in the concentration (6 hours maximum credit applicable to degree requirements) or complete the nonthesis option by enrolling in Master’s Project (4 hours applicable to degree requirements). While enrolled, the candidate submits a research paper related to the specialization to the adviser. Check with the department for specific course requirements for the 36-hour master’s degree option.

Specialist in Education

The Specialist in Education program consists of two years of full-time graduate study (about 70 semester credit hours) followed by a third year of internship. Students completing the program are licensed for early childhood through grade 12 if they obtain 100 hours of applied experience with young children and their families in practica or internship.

Doctoral Degree Admission Policies

The application for admission to graduate studies and the Graduate Division of the School of Education for doctoral study must specify the major program area. Materials included with the application form usually consist of (1) original transcripts of undergraduate- and graduate-level courses indicating grade-point average, (2) letters of recommendation and/or survey-type evaluation forms from previous instructors and professional colleagues, (3) personal statements about professional goals, (4) representative writings and/or other media samples related to the proposed area, (5) a résumé of professional experience, and (6) scores from the verbal, quantitative, and writing sections of the Graduate Record Examination. Each department in the Graduate Division has determined the specific information required for admission. Contact the graduate adviser of the department that offers the major for instructions about completing the application for admission.

In general, applicants with 3.5 grade-point averages on a 4.0 scale for the first 30 graduate-level hours (e.g., master’s degree), scores of 500 on the verbal and quantitative sections of the GRE, and validated strengths on the additional indicators have been admitted as regular graduate students to doctoral programs. However, this profile is intended only as an example and should not be construed as a guarantee of admission to a doctoral program. Several programs have limited student admissions because of the need to balance faculty resources with the demands of maintaining high-quality teaching, scholarship, and professional service activities.

Departments offering approved doctoral programs may recommend provisional admission of a student who has not met the criteria or prerequisites to do advanced graduate-level work. Provisional admission requires the satisfactory completion (e.g., with a 3.5 grade-point average) of 12 or more hours in regularly scheduled graduate courses, at least half of which must come from core areas. After the completion of the provisional program, the department recommends to the Graduate Division that the student (1) be transferred to regular status or (2) be allowed to continue for another 9 hours or (3) be dropped from the program.

Doctor of Education

The Doctor of Education, a professional degree primarily for practitioners in education, is awarded upon completion of three years of advanced training in both the theory and the practice of education. The Ed.D. is offered in curriculum and instruction, educational administration, higher education, and special education.

Advisory Committee

A student admitted to study for the Ed.D. is known as an aspirant for the degree until the comprehensive examination has been passed. After passing this examination, the student is known as a candidate for the degree.

Each student must have an advisory committee of at least three members of the Graduate Faculty. One member of the committee serves as the chair. The student meets with this committee before completing 12 hours of course work to plan and approve formally an appropriate program leading to the Ed.D. The approved program, signed by members of the committee and the student, is placed in the student’s file in the School of Education Graduate Division office.

Requirements

Students must acquaint themselves thoroughly with departmental requirements for the degree, which may be in addition to general requirements and those of the School of Education.

1. Time Limit. To ensure continuity of progress and currency of knowledge, doctoral degree students normally complete all requirements for the degree in eight years after first enrollment in a program leading directly to a doctoral degree. Except for the core requirement, course work submitted to complete doctoral degree requirements must be completed within school or departmental time limits or extensions thereto. The Graduate Division has the authority to grant a one-year extension of the normal eight-year time limit for compelling reasons, on the written advice of the dissertation committee. If more than nine years are requested, the appropriate appeals body of the school considers petitions for extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions. There is a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the programs, some may have more stringent policies on time extensions. Students should inquire about the specific policies in effect in the department or program in which they intend to study.

A student may petition the School of Education Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the student’s doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily a leave of absence is granted for one year, with the possibility of extension on request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and, to continue, must apply for readmission to the program and the Graduate Division.

2. Period of Continuous Study. The student must spend the equivalent of three academic years, including the time spent attaining the master’s degree, in a period of continuous study at this or another approved university. During the time the student is engaged in the Ed.D. program at KU, one of the following options must be satisfied:

(a) Two consecutive semesters, one of which may be a summer session, of full-time enrollment in regularly scheduled courses normally at the program’s home campus. (Full time equals 9 hours in fall or spring and 6 hours in summer.)

(b) Two consecutive semesters of at least 6 hours and an adjacent summer session of at least 3 hours, all in regularly scheduled courses at the program’s home campus.

(c) Three consecutive semester enrollments (excluding summer session) of at least 6 hours each in regularly scheduled courses at the program’s home campus.
Doctor of Education

(d) Eighteen (18) hours taken during the period encompassed by two consecutive summer sessions with enrollment in each of the four semesters: summer, fall, spring, summer.

(e) Twenty-seven (27) hours taken during any five consecutive semesters (including summer sessions) with enrollment each semester. During this period, the student must be employed full-time in a field directly related to the student’s academic major.

These options include the following stipulations:

• Only course work taken after the first year of graduate study, that is, after the master’s degree or its equivalent, may satisfy the period-of-continuous-study requirement.

• Dissertation, individual study, field experience, and off-campus practicum hours may not be included in the stated minimal requirements.

• For all enrollments of 8 hours or more, one course may be taken away from the program’s home campus, e.g., on the KU Edwards Campus, if need can be demonstrated from a scheduling standpoint.

For options (b), (c), and (d), at least quarter-time, appropriately related, professional involvement on or off campus is required.

The period of continuous study is not merely a requirement measured in hours of enrollment or of credit in courses counted toward a degree but may include other academic and professional activities appropriate to the field of study.

The student, with the help of the advisory committee, must file in the Graduate Division office a period-of-continuous-study plan congruent with School of Education requirements before the beginning of the formal period of continuous study. This plan may be filed as a part of the overall program plan.

The period-of-continuous-study requirement for the Ed.D. ensures a minimum period of bona fide on-campus study and related academic and professional involvement. Because of the particular professional nature of the degree, appropriately related professional endeavors may include off-campus activities. However, the credit-hour elements of the requirement must be fulfilled by course work at the program’s home campus. (Note the exceptions above.) Exceptional circumstances or plans must be approved in advance on an individual basis by petition to the Graduate Division of the School of Education.

3. Hours Beyond Master’s Degree. All candidates for the Ed.D. must complete a minimum of 48 semester credit hours above the master’s degree level or its equivalent at KU. Credit for the dissertation may be part of these hours. The candidate’s committee determines the total number of hours required. Candidates for the Doctor of Education degree do not specify a minor area. The concentration must contain a minimum of 40 semester hours of appropriate and related course work. Courses that were counted toward the requirements for a graduate degree, completed either at KU or at another institution, may not be used toward the requirements for an additional advanced degree at KU. However, departments take relevant prior graduate work into consideration in setting up programs of study. Credit for the dissertation is considered part of the concentration. Upon admission to doctoral study, students who have not completed a research and evaluation methods course for the education master’s degree must take the course, e.g., PRE 715, during the first doctoral enrollment. The course used to fulfill this requirement, whether taken at KU or at another institution, does not count toward any doctoral requirements.

4. Core Requirement. Doctoral students must have on their graduate records the following common core of course work:

(a) At least one course in statistics or research.

(b) At least one course in human learning or development.

(c) At least one course in the history or philosophy of education.

(d) At least one course in general curriculum or general instructional strategies.

The core requirement should be completed before the comprehensive examination is scheduled or by the end of the semester in which it is scheduled.

5. Research Skills. Before being admitted to the comprehensive examination, students must present satisfactory evidence that they possess the professional research skills of advanced practitioners in their concentrations by meeting the following research skills requirements: Complete a minimum of 12 hours of graduate study in one or more supporting areas that develop skills relevant to understanding, promoting, and evaluating professional practice. Supporting areas may include statistics, assessment and evaluation, qualitative methods, or historical or philosophical methods. For all programs, students must take at least one course in evaluation. Up to 6 hours, excluding credit hours for the required master’s course in research methods and evaluation, whether taken at KU or elsewhere, may be waived using prior B-level or higher graduate course work. Research skills requirements vary among programs to meet the individual needs of students. The student must secure the most recent information on research skills requirements from the appropriate department.

The research skills requirements chosen by the student must be approved and passed upon by the advisory committee. The chair must file the results in the School of Education Graduate Division office on the appropriate form so that they may be recorded on the student’s permanent record.

6. Doctoral Practicum Enrollment. Ed.D. aspirants must complete at least one structured 3-credit-hour practicum in a supervised internship setting. A description of the practicum prepared by the student and approved by the advisory committee must be filed with the department and the graduate records office. Specific requirements for this practicum experience are available from students’ departments.

7. Comprehensive Examination. The comprehensive examination should be scheduled after the student has completed the research skills requirements and all, or a major portion, of the course work for the concentration. The department must request the School of Education Graduate Division office to schedule the comprehensive examination. This request is to be made at least two weeks before the date of the written portion of the examination. The written portion must be taken during an established one-week period near the midpoint of each semester and early in the summer session. Exact dates for each academic year are available from the Graduate Division office early in the spring semester. Students must be enrolled when they take the examination.

The examining committee must consist of at least five members (usually including the advisory committee), all of whom are on the Graduate Faculty. One member is designated the Graduate Studies representative and must be from a department other than the department of the concentration.

The student passes the comprehensive examination if a majority of the official examining committee (including the chair) approves the student’s performance. The grade on this examination is Honors, Satisfactory, or Unsatisfactory. If the aspirant fails the comprehensive examination, he or she may be allowed,
upon the department’s recommendation, to repeat it, but it may not be taken more than three times. In any case, the student may not repeat the examination until at least 90 days have elapsed since the last unsuccessful attempt. Note: Students in Ed.D. programs must pass both written and oral components of the comprehensive examination. Satisfactory performance on the written component must be attained before the oral component may be attempted. To fail either component is to fail the examination. All members of the student’s comprehensive examination committee are involved in the evaluation process. The written component of the comprehensive examination, like the oral, focuses on advanced knowledge in the major and any appropriately related areas. The focus of the examination is the ability to relate this knowledge to tasks and problems faced by practitioners. The duration of the entire written component of the comprehensive examination is to be a minimum of 16 hours. If a student passes the written component but fails the oral, the examining committee determines whether both components or only the oral must be repeated, after the minimal 90-day interim period.

8. Dissertation Committee and Proposal. Doctoral aspirants may begin work on the dissertation after they complete the equivalent of one full-time semester of doctoral study in regular student status and may use their research practicum experience in preparation for the dissertation. However, students may first enroll in dissertation credit hours only during the semester in which they take their comprehensive examinations. Dissertation hours taken during that semester count toward the minimum of 18 hours of dissertation credit only if the examinations are passed during that same semester.

Upon passing the comprehensive examination, the aspirant becomes a candidate for the Doctor of Education degree. Based on recommendations of the candidate’s department, the Graduate Division designates the candidate’s dissertation committee at this time. This committee must consist of at least three members (usually including the advisory committee) and may include members from other departments and, on occasion, from outside the university. All committee members are to be members of the Graduate Faculty. A committee member from outside the university becomes an Ad Hoc member of the Graduate Faculty.

The dissertation proposal must be read by all members of the dissertation committee. One (1) copy of the approved dissertation proposal, signed by all members of the dissertation committee, must be submitted (with the appropriate form) to the School of Education Graduate Division office.

9. Continuous Enrollment. After passing the comprehensive examination, the candidate must be continuously enrolled, including summer sessions, until the degree is completed. Each enrollment must reflect as accurately as possible the candidate’s demands on faculty time and university facilities. A student must be continuously enrolled in accordance with the following schedule: Until the degree is completed or until 18 post-comprehensive hours have been completed (whichever comes first), the student must enroll for a minimum of 6 hours a semester and 3 hours a summer session. Students who have not completed the degree after completing 18 hours of post-comprehensive enrollment must continue to enroll for the amount of credit that best reflects their demands on faculty time and university resources each semester and each summer session until they pass the final oral examination. Post-comprehensive enrollment may include enrollment during the semester or summer session in which the comprehensive examination has been passed. Students may enroll for dissertation hours as well as other courses when the examination is taken. Students who do not pass the examination cannot apply dissertation hours to degree requirements. The candidate may petition the School of Education Graduate Division for a leave of absence during the period between the comprehensive examination and the final oral examination. Again, specific degree programs may have more stringent rules than general requirements.

10. Dissertation. The candidate must present a dissertation that exhibits the application of existing knowledge in the major field of professional study. Ed.D. candidates may satisfy the dissertation requirement by completing a comprehensive, critical assessment of the relevant literature on a major educational issue or problem. This study should demonstrate the application of existing knowledge to the author’s area of professional practice. Various styles and formats for theses and dissertations are acceptable. The format and style of a student’s thesis or dissertation is left to the discretion of the student and the advisor, but format and style options may be constrained or dictated by the policy of the department from which the student is to receive the degree. The dissertation is prepared under the direction of the dissertation committee. The norm for dissertation enrollment is about 24 credit hours. The minimum number of dissertation hours in any degree program is 18. Instructions regarding the proper form of the final document may be obtained from the School of Education Graduate Division office.

11. Final Oral Examination. When the dissertation has been tentatively accepted by the dissertation committee, the chair of the dissertation committee may request the School of Education Graduate Division office to schedule the final oral examination. This request must be made at least two weeks before the desired examination date. At least five months must elapse between the successful completion of the comprehensive examination and the date of the final oral examination. Upon approval by the Graduate Division, the final oral examination is scheduled at the time and the place designated in the request and publicly announced. Although the dissertation committee is responsible for the certification of the candidate, any member of the Graduate Faculty may be present at the examination and may participate in the questioning. The official examining committee consists of at least five members, including the dissertation committee. At least one member must be from a department other than the candidate’s major department. This member represents Graduate Studies.

The final examination must be partly oral and may be wholly so. The examination covers the dissertation and the concentration. The candidate passes the final examination if a majority of the official examining committee (including the chair) approves the candidate’s performance. When the final oral examination has been passed, the dissertation committee reports a grade of Honors, Satisfactory, or Unsatisfactory. Candidates who fail the final oral examination may be allowed to repeat it upon the recommendation of the dissertation committee.

12. Dissertation Copies. When the final oral examination has been passed and the dissertation has been signed by the members of the dissertation committee, a title page and acceptance page with original signatures are to be delivered to the Graduate Division so that completion of degree requirements may be officially certified. In addition, the candidate must arrange publication of the dissertation and pay appropriate fees through the electronic submission process found at www.graduate.ku.edu.

Doctor of Philosophy with a Major in Education

The Doctor of Philosophy degree is awarded for mastering a field of scholarship, learning the methods of investigation appropriate to that field, and completing a substantial piece of original research. The Ph.D. is offered in all education graduate programs.

Although the courses and the research leading to the Ph.D. are necessarily specialized, the attainment of this degree should not be an isolated event in the enterprise of learning. The aspirant for the Ph.D. is expected to be a well-educated person and should have acquired a broad base of general knowledge, both as preparation for more advanced work and as a means of knowing how the concentration is related to other fields of human thought.
Advisory Committee
A student admitted to study for the Ph.D. is known as an aspirant for the degree until the comprehensive examination has been passed. After passing this examination, the student is known as a candidate for the degree.

Each student must have an advisory committee consisting of at least three members of the Graduate Faculty. One member of the committee serves as the chair. One member must be from the graduate department representing the student’s minor area. The student meets with this committee before completing 12 hours of course work to plan and approve formally an appropriate program leading to the Ph.D. The approved program, signed by members of the committee and the student, is placed in the student’s file in the School of Education Graduate Division office.

Requirements
Students must acquaint themselves thoroughly with departmental requirements for the degree, which may be in addition to general requirements and those of the School of Education.

1. Time Limit. To ensure continuity of progress and currency of knowledge, doctoral degree students normally complete all requirements for the degree in eight years after first enrollment in a program leading directly to a doctoral degree. Except for the core requirement, course work submitted to complete doctoral degree requirements must be completed within school or departmental time limits or extensions thereto. The Graduate Division has the authority to grant a one-year extension of the normal eight-year time limit for compelling reasons, on the written advice of the dissertation committee. If more than nine years are requested, the appropriate appeals body of the school considers petitions for extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions. There is a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the programs, some may have more stringent policies on time extensions. Students should inquire about the specific policies in effect in the department or program in which they intend to study.

A student may petition the School of Education Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the student’s doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily, a leave of absence is granted for one year, with the possibility of extension on request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and, to continue, must apply for readmission to the program and the Graduate Division.

2. Resident Study. The student must spend the equivalent of three academic years, including the time spent attaining the master’s degree, in resident study at this or another approved university. Because general requirements do not specify a minimum number of hours for the degree, no transfer of credits is appropriate. Departments do, however, consider relevant prior graduate work in setting up programs of study leading to the doctorate.

Residence Requirement. Two semesters (which may include one summer session), usually consecutive, at any time beginning with the first semester of doctoral study must be spent in resident study at KU. Residence is not merely a period measured in hours. During this period the student must be involved full time in academic pursuits, which may include up to half-time on-campus teaching or research, or under certain circumstances, a greater percentage of research if it is directed specifically toward the student’s degree objectives. Such activities permit commensurate decreases in the hourly enrollment minima. The student must continue to be enrolled in at least 6 hours under any special conditions. Increased research involvement must be fully supported and documented by the dissertation adviser as contributing to the student’s dissertation. The research work must be performed under the direct supervision of the student’s adviser, if on campus, or with adequate liaison, if off campus. Special circumstances such as internal employment for more than half time as a teaching or research assistant, or as another type of university employee, must have advance approval on an individual basis by petition to the Graduate Division of the School of Education. The student, with the help of the advisory committee, must file in the Graduate Division office a residence plan congruent with School of Education requirements before the beginning of the formal residence period. This plan may be filed as a part of the overall program plan. Because residence is not merely a requirement measured in hours of enrollment or of credit in courses toward a degree, the plan may include other academic and professional activities appropriate to the field of study.

Note: Hourly enrollment requirements must be met through courses at the program’s home campus, and if appropriate internal employment is not involved, at least 9 hours must be in regularly scheduled courses. Exception: One course each period may be taken away from the home campus, e.g., on the KU Edwards Campus, provided that scheduling needs can be demonstrated.

3. Program Area. In applying for doctoral study, the student specifies a program area in which formal classes and research work are to be done and in which she or he expects to become a scholar. An area must contain a minimum of 40 credit hours of course work. Courses that were counted toward the requirements for a graduate degree, completed either at KU or at another institution, may not be used toward the requirements for an additional advanced degree at KU. However, departments take relevant prior graduate work into consideration in setting up programs of study. Credit for the dissertation is part of the area. A student working for the Ph.D. specifies a minor outside the program in which the area is completed. The minor must contain at least 12 hours of courses, and it should be related to and supportive of the area. A minor including courses in more than one area may be allowed upon petition by the advisory committee to the Graduate Division. Upon admission to doctoral study, students who have not completed a research and evaluation methods course for the education master’s degree must take the course, e.g., PRE 715, during the first doctoral enrollment. The course taken to fulfill this requirement, whether taken at KU or at another institution, does not count toward any doctoral requirements.

4. Core Requirement. Doctoral students must have on their graduate records the following common core of course work:
   (a) At least one course in statistics or research.
   (b) At least one course in human learning or development.
   (c) At least one course in the history or philosophy of education.
   (d) At least one course in general curriculum or general instructional strategies.

The core requirement should be completed before the comprehensive examination is scheduled or by the end of the semester in which it is scheduled.

5. Teaching Experience. In addition to the requirements above, the student must satisfactorily complete course 996 College Teaching Experience for 2 hours of credit. In this course, the candidate assists a major professor for one semester. The course may be completed during the semester in which the student takes the comprehensive examination, but ordinarily it should be completed before admission to the comprehensive examination. The course may be waived with written documentation of prior successful teaching experience and the approval of the appropriate program or departmental committee.

6. Research Skills. Before being admitted to the comprehensive examination, the student must present satisfactory evidence of research skills. Specific research skills requirements vary with department and program, but all reflect the expectation of a significant research skills component distinct from the dissertation but...
strongly supportive of it. The Ph.D. research skills requirement includes completion of at least 12 graduate hours representing at least two of the following areas relevant to the aspirant’s research: statistics, measurement and assessment, qualitative methods, historical and philosophical methods, or foreign language (a reading knowledge in one foreign language is equivalent to 6 hours of credit). Up to 6 hours, excluding credit hours for the required master’s course in research methods and evaluation, whether taken at KU or elsewhere, may be waived using prior B-level or higher graduate course work. A statement concerning specific research skills should be secured from the student’s major department.

When the student has met the requirements for research skills, the committee chair must report this to the Graduate Division on the appropriate form, certifying that the student is prepared to proceed to the comprehensive oral examination. If a program requires research skills that are tested separately rather than integrally with the program, the completion of each requirement should be reported immediately to the Graduate Division so that it may be recorded on the student’s permanent record.

Some commonly used skills are listed under Research Skills, Doctor of Philosophy in the General Information chapter.

7. Comprehensive Examination. When a Ph.D. aspirant has completed the major portion of the course work at a satisfactory level and has completed the research skills requirement and all other departmental requirements prerequisite to the comprehensive examination, the department asks the School of Education Graduate Division office to schedule the comprehensive examination. This request is to be made at least two weeks before the date of the written portion of the examination. The written portion must be taken during an established one-week period near the midpoint of each semester and early in the summer session. Exact dates for each academic year are available from the Graduate Division office early in the spring semester. Students must be enrolled when they take the examination.

The committee for the comprehensive examination must consist of at least five members, all members of the Graduate Faculty. This committee is usually the advisory committee, including the minor area member. At least one member must be from a department other than the aspirant’s major department. This member represents Graduate Studies.

The comprehensive examination consists of both written and oral parts and covers the major and minor areas pursued by the student. The student passes the comprehensive examination if a majority of the official examining committee (including the chair) approves the student’s performance. The grade on this examination is Honors, Satisfactory, or Unsatisfactory. An aspirant who receives a grade of Unsatisfactory may be allowed, upon the recommendation of the department, to repeat it, but it may not be taken more than three times. The aspirant may not repeat the examination until at least 90 days have elapsed since the last unsuccessful attempt.

Note: Students in Ph.D. education programs must pass both written and oral components of the comprehensive examination. Satisfactory performance on the written component must be attained before the oral component may be attempted. To fail either component is to fail the examination. All five members of the student’s comprehensive examination committee are involved in the evaluation process. The written component of the comprehensive examination, like the oral, focuses on advanced knowledge in the major and any appropriate related areas, including the minor. To pass, the student must be evaluated as having responded satisfactorily to questions in both the major and minor areas. If a student fails either the major or the minor portion of the written comprehensive component, the examining committee determines if the entire written component of the examination, or only the failed portion(s), must be retaken. The entire written component lasts a minimum of 16 hours. If a student passes the written component but fails the oral, the examining committee determines if both components or only the oral must be repeated, after the minimal 90-day interim period.

8. Dissertation Committee and Proposal. Doctoral aspirants may begin work on the dissertation after they complete the equivalent of one full-time semester of doctoral study in regular student status and may use their research praxisum experience in preparation for the dissertation. However, students may first enroll in dissertation credit hours only during the semester in which they take their comprehensive examinations. Dissertation hours taken during that semester count toward the minimum of 18 hours of dissertation credit only if the examinations are passed during that same semester.

Upon passing the comprehensive examination, the aspirant becomes a candidate for the Ph.D. The Graduate Division, using the recommendations of the candidate’s department, designates the dissertation committee at this time. This committee consists of at least three members (usually including the advisory committee) and may include members from outside the university. All committee members are to be members of the Graduate Faculty. A committee member from outside the university becomes an Ad Hoc member of the Graduate Faculty.

The dissertation proposal must be read by all members of the dissertation committee. One (1) copy of the approved dissertation proposal, signed by all members of the dissertation committee, must be submitted (with the appropriate form) to the School of Education Graduate Division office.

9. Continuous Enrollment. After passing the comprehensive examination, the candidate must be continuously enrolled, including summer sessions, until the degree is completed. A student must be continuously enrolled in accordance with the following schedule: Until the degree is completed or until 18 post-comprehensive hours have been completed (whichever comes first), the student must enroll for at least 6 hours a semester and 3 hours a summer session. Students who have not completed the degree after completing 18 hours of post-comprehensive enrollment must continue to enroll for the amount of credit that best reflects their demands on faculty time and university resources each semester and each summer session until they pass the final oral examination. Post-comprehensive enrollment may include enrollment during the semester or summer session in which the comprehensive examination has been passed. Students may enroll for dissertation hours as well as other courses when the examination is taken. Students who do not pass the examination cannot apply dissertation hours to degree requirements. Under certain conditions, the candidate may petition the School of Education Graduate Division for a leave of absence during the period between the comprehensive examination and the final oral examination.

10. Dissertation. The candidate must present a dissertation showing the results of original research. The dissertation for the Ph.D. considers applied or basic concerns and results in conclusions that have broad theoretical implications. Various styles and formats for theses and dissertations are acceptable. The format and style of a student’s thesis or dissertation is left to the discretion of the student and the adviser, but format and style options may be constrained or dictated by the policy of the department from which the student is to receive the degree. The dissertation is prepared under the direction of the dissertation committee. The norm for dissertation enrollment is about 24 credit hours. The minimum number of dissertation hours in any degree program is 18. Instructions regarding the proper form of the final document may be obtained from the School of Education Graduate Division office.

11. Final Oral Examination. When the dissertation has been tentatively accepted by the dissertation committee, the chair of the dissertation committee may request the School of Education Graduate Division office to schedule the final oral examination. This request must be made at least two weeks before the desired examination date. At least five months must elapse between the successful completion of the comprehensive examination and the date of the final oral examination.

The committee for the final oral examination consists of at least five members, including the dissertation committee plus other members of the Graduate Faculty recommended by the chair of the dissertation committee and/or the department and appointed...
Programs

Programs in curriculum and instruction prepare students to complete advanced degrees by addressing critical issues in learning, teaching, and curriculum, from local to global levels. The Master of Arts with a major in education and Master of Science in Education are available for students who hold the bachelor’s degree and seek to advance their knowledge and skills in their professional areas or areas of interest. The Doctor of Education and Doctor of Philosophy with a major in curriculum and instruction are for students who plan to pursue employment at the college level or assume major leadership positions in schools. An initial licensure program is also available to students who already hold the bachelor’s degree and want to teach foreign language, mathematics, or science. The Graduate Licensure Program combines graduate and undergraduate courses including a semester-long student teaching experience that helps students obtain the initial teaching license while completing the Master of Science in Education degree. Areas of emphasis for advanced degrees in curriculum and instruction may include foreign language education, language arts education, mathematics education, science education, social studies education, literacy education, teaching English as a second language, educational communication and technology, curriculum studies, gifted and talented education, and economics education.

Admission

In addition to general requirements for admission to graduate study in the School of Education, concentrations in curriculum and instruction require completion of an appropriate undergraduate program and, in some instances, a teaching license.

Materials describing all curriculum and instruction programs may be obtained from the department. The deadlines for doctoral applications are February 1 for summer or fall semesters and October 15 for spring semester. Deadlines for the master’s application are February 1 for summer session, July 1 for fall semester, and October 15 for spring semester.

Submit your application online at www.graduate.ku.edu. All other application materials for admission to graduate study in curriculum and instruction should be sent to the department.

Admission to Master’s Programs: Minimum requirements are a completed graduate application, two official transcripts of all college records, three letters of recommendation, a goal statement, and a vita or résumé. Non-native speakers of English must provide results of the Test of English as a Foreign Language or a degree from a university where English is the dominant language.

Admission to Doctoral Programs: Minimum requirements are a completed graduate application, two official transcripts of all college records, and

• Master’s degree or equivalent with at least a 3.5 grade-point average on a 4.0 scale.
• Graduate Record Examination general test scores (successful candidates normally have scores of at least 500 on the verbal and 500 on the quantitative sections).
• Statement of career goals: how this degree will help meet professional aspirations and areas of interest in curriculum and instruction.
• Letter of reference from three people; the master’s thesis adviser is appropriate.

The Department of Curriculum and Teaching offers a broad range of professional programs in curriculum and instruction.
• An article, paper, or other composition written by the applicant, of no more than eight to 10 pages.
• A vita or résumé.
• For non-native speakers of English, a degree from a university where English is the dominant language or a TOEFL score.

When application materials are processed and program requirements are met, an adviser is assigned according to the student’s interest. Each student should consult the assigned adviser during each enrollment period. Doctoral candidates should develop a program plan at the first enrollment or promptly thereafter. A copy of this program should be filed with the Graduate Division of the School of Education. Basic and applied research skills, including statistics, research design, and related requirements appropriate to the degree, are required for the Ph.D. and Ed.D. Specific descriptions of research options may be obtained from the department.

Once the application has been submitted online, send the additional application materials to

The University of Kansas
Department of Curriculum and Teaching
Joseph R. Pearson Hall, 1122 W. Campus Road, Room 321
Lawrence, KS 66045-3101

Or contact us: ctepartment@ku.edu

I Curriculum and Teaching Courses

C&T 500 Student Teaching in: _____ (1-6).

C&T 501 Student Teaching Practicum in: _____ (6).

C&T 598 Special Course: _____ (1-5).

C&T 620 Teaching English as a Second Language/Bilingual Education (3).

C&T 621 Diagnosis and Remediation in Second Language Education (3).

C&T 622 Second Language Acquisition (3).

C&T 630 Understanding the Nature of Talent in Children and Youth (3).

C&T 631 Teaching for Talent Development (3).

C&T 649 An International Teaching Experience (3).

C&T 701 Alignment of Curriculum, Instruction, and Assessment at the Early Childhood and Elementary School Levels (3). The course focuses on standards-based education reform and the relation between standards, curricula, assessments, and instruction at the early childhood through elementary school level. Since the inception of No Child Left Behind in 2001, many early childhood and elementary school classroom teachers have felt constrained by standards-based practices in the classroom. This course will address the broad-based curriculum issues that early childhood and elementary school teachers face when teaching all content areas. A significant emphasis of the course will be on the implications of high-stakes testing for teaching and learning, reading, and science. The course will explore the historical foundations of the standards movement as well as current research on connecting standards to instructional practices within individual content areas. The course will also examine ways in which middle school and secondary school classroom teachers can be accountable to the standards without losing creativity in their individual classrooms. Prerequisite: Admission into the professional (graduate) year of the teacher education program.

C&T 702 Alignment of Curriculum, Instruction, and Assessment at the Middle and Secondary School Levels (3). The course focuses on standards-based education reform and the relation between standards, curricula, assessments and instruction at the middle and secondary levels. This course will investigate issues specific to each of the individual content licensure areas, including mathematics, science, social studies, English, and foreign language. Since the inception of No Child Left Behind in 2001, many middle school and secondary school classroom teachers have felt constrained by standards-based practices in the classroom. This course will explore the historical foundations of the standards movement as well as current research on connecting standards to instructional practices within individual content areas. The course will also examine ways in which middle school and secondary school teachers can be accountable to the standards without losing creativity in their individual classrooms. Prerequisite: Admission into the professional (graduate) year of the teacher education program. LEC 708 Teaching in the Middle School (3).

The purpose of this course is to provide preservice and practicing middle grades educators the following: (1) an overview of the historical and philosophical antecedents of social studies education; (2) a brief review of developmental and educational characteristics of early adolescents; (3) the specifics of a citizenship education program specifically designed for middle grades social studies; and (4) a range of time-tested ideas for challenging young adolescents with academic experiences that address their unique developmental profile and aptitudes. Emphasis will be on experiences appropriate to enhancing the student’s teaching level and area, or equivalent. FLD 740 Foundations of Reading: Process, Theory, and Instruction (3). It is the purpose of this course to introduce students to the foundations of the reading process, developmental levels, theory, models, and procedures at the emergent, elementary, and secondary levels. Elements of cultural, linguistic, and ethnic diversity that affect the reading process are included. Students work with research related to the reading process, remediation, and assessment.

C&T 742 Comprehension and Study Strategies for Use with Multiple Texts (3). It is the purpose of this course to introduce students to the foundations of the reading process, developmental levels, theory, models, and procedures at the emergent, elementary, and secondary levels. Elements of cultural, linguistic, and ethnic diversity that affect the reading process are included. Students work with research related to the reading process, remediation, and assessment. LEC 743 Writing and Spelling Development and Instruction (3). A study of the research base on writing, spelling, speaking, and listening for teaching the language arts; an overview of development in writing and spelling, the writing and spelling processes, instruction, and applications to teaching the language arts. Prerequisite: Admission to a master’s program within the School of Education, C&T 740 or permission of the instructor. LEC.
Students seeking added endorsements for teaching licenses should consult an adviser in the appropriate department.

The Center for Economic Education increases the economic literacy of pre-service and in-service teachers through teaching and consultation in economic education.

At least 8 hours must be completed at KU if it is to be the recommending institution for adding endorsements to the teaching license.
today’s classrooms. It will include an evaluation of materials for bias and stereo-
types. Field experiences will be a part of this course. The course will develop a com-
prehensive understanding of the major elements of qualitative research, while offering each student an
opportunity to examine research topics and methods of personal interest, with
particular attention to curricular issues. The course also includes practical experi-
ence with writing both qualitative and quantitative research papers.

C&T 809 Creative Thinking and Learning (3). This course provides an opportunity
for the students to understand the nature of the creative process in educational settings.
The course includes a review of the creative process, with an emphasis on the
importance of creativity in the learning process. The course includes a review of the
creative process, with an emphasis on the importance of creativity in the learning process.
The course also includes practical experience with creative problem solving and
writing.

C&T 821 Diagnosis and Remediation in Second Language Education (3). This course
provides an overview of diagnostic techniques and instruments used to identify
and remediate specific learning difficulties associated with second language development in the
area of listening, speaking, reading, and writing. The course includes a review of research concerning assessment as it relates to error analysis in the second language context. Corequisite: C&T 820. LEC

C&T 822 Second Language Acquisition (3). This course provides an intensive review
of the theory and research base of second language acquisition. Particular attention is
given to the development of research trends in second language acquisition and
language education theory and practice. Current trends in second language education are
examined in light of the historical theory base. Corequisite: C&T 820. LEC

C&T 823 Developing Intercultural Awareness in the Second Language Classroom (3).
This course includes the study of the interrelationship of language and culture and the
use of multicultural training techniques to develop cultural awareness and positive at-
titudes in the second language classroom. Emphasis is on the integration of culture in
the second language curriculum. Prerequisite: C&T 820 or C&T 803. LEC

C&T 824 Problems in Second Language Instruction (3). This course presents a
study of the research and trends in the area of second language instruction. The course
includes a review of current trends and issues in second language instruction, with
emphasis on the cultural and linguistic aspects of the second language learning
context. Prerequisite: C&T 820. LEC

C&T 825 Practicum in Teaching English as a Second Language/Bilingual Educa-
tion (3). This course provides a supervised teaching experience in a setting appro-
priate to the goals of the program. This course is designed to develop a common understand-
ing of the major elements of qualitative research, while offering each student an
opportunity to examine research topics and methods of personal interest, with
particular attention to curricular issues. The course also includes practical experi-
ence with writing both qualitative and quantitative research papers.

C&T 840 Emergent Literacy and Beginning Reading (3). A study of emergent liter-
acy through the beginning stages of literacy development. This course focuses
on identification; and using assessment information to develop a group or individ-
al educational plan. Parent and student roles in the assessment process are also
emphasized. An evidence-based practice course for teachers, administrators, and
support personnel. Prerequisite: Admission to Graduate School in Education. LEC

C&T 841 Early Intervention in Reading Practicum (3). A case study approach to
the treatment of preschoolers through grade two with reading disabilities. Requires di-
gnostic testing of the learner, compilation of case study reports, and participating in
staffing for the purpose of designing remedial reading programs. Students also participate in implementation of remedial programs with pre-adolescent through adults through tutoring in either a clinical setting or a public school setting. Prerequisite: Admission to a masters program within the School of Education, C&T 740, C&T 741, C&T 840, or C&T 842, or permission of instructor. LEC

C&T 845 Reading Specialist Internship (1-2). Supervised and directed experiences to
support the development of a teacher candidate's professional identity. Activities will include
district and building level needs assessment, data analysis, professional development of teachers and paraprofessionals, and cooperation with parents and school personnel. Prerequisites: Admission to Graduate School in Education, C&T 820, or C&T 824. LEC

C&T 850 Seminar in Science and Mathematics Educational Research (3). This course
will explore current research on issues important to middle and high school science teachers so they can use research to support and improve their classroom practice. Prerequisite: Teaching experience in middle level or high school science or permission of instructor. LEC

C&T 852 Instruction in Mathematics and Science (3). In this course, students will
explore a variety of research-based instructional theories, models, and strategies for
teaching and learning mathematics and science. They will apply and evalu-
ate the usage of one instructional strategy in an action research project in their
classrooms. Prerequisite: C&T 709. LEC

C&T 853 Connecting Research to Classroom Practice in Middle/Secondary School Science and Mathematics Education (3). An introduction to the current state of research in science and mathematics education in order to better understand research in these fields from both a historical and contemporary perspective. The process of examining literature in these fields will be used to help understand how to plan, conduct, and evaluate research in science and math education. This course emphasizes both qualitative and quanti-

tative research in science and math education. LEC

C&T 855 Curriculum in Science and Mathematics (3). A study of the formal and
informal science and mathematics curriculum. Emphasis is on the integration of curricu-

mum and extracurricular activities with the science and mathematics curriculum. Prerequisite: C&T 740, C&T 741, or permission of instructor. LEC

C&T 856 Practicum in Science Education (1-3). Intensive supervised experience
work with middle school science teachers in a purposeful and reflective manner. Prerequisite: Admission to the program. LEC

C&T 865 Practicum in Mathematics Education (1-3). Intensive supervised experi-
enced work with middle school mathematics teachers. Prerequisite: Admission to the program. LEC

C&T 868 Connecting Research to Classroom Practice in Middle/Secondary School Science and Mathematics (3). An introduction to the current state of research in science and mathematics education in order to better understand research in these fields from both a historical and contemporary perspective. The process of examining literature in these fields will be used to help understand how to plan, conduct, and evaluate research in science and math education. This course emphasizes both qualitative and quanti-

tative research in science and math education. LEC

C&T 881 Personal Dimensions of Talent (1). The course focuses on the positive
aspects of individuals with high potential. Particular attention is paid to populations who are traditionally underserved due to ethnicity, socio-economic status, geography, or multiple exceptionality. Topics include: models and methods for recognizing, nurturing, and enhancing talent; the effects of identification; and using assessment information to develop an educational plan. Parent and student roles in the assessment process are also emphasized. An evidence-based practice course for teachers, administrators, and
support personnel. Prerequisite: Admission to Graduate School in Education. LEC

98
C&T 903 Curriculum Supervision (3). An intensive study of the theoretical and research bases for curriculum supervision and improvement. Topics include models and practices in supervision and staff development, skills and instruments used in curriculum supervision, and the importance of human and material resources, and the dynamics of change strategies. LEC

C&T 904 Philosophical Questions in Curriculum and Teaching (3). This course addresses philosophical questions pertaining to curriculum and teaching across a range of educational contexts. These questions center on epistemology, ethics, and the assumptions underlying alternative approaches to research in education. Students completing this course should be able to engage in philosophical inquiry and apply relevant philosophical literature and principles to the examination of curriculum and teaching. LEC

C&T 905 Teacher Education in the U.S. (2). A study of the development, issues, and practices in the preparation of prospective teachers. Open only to graduate students. LEC

C&T 906 Qualitative and Critical Inquiry: Analysis and Interpretation (3). Supports novice researchers in extending their understanding of the theoretical frameworks underlying qualitative research, qualitative methodologies, the research process and its relationship with curriculum inquiry. During the course we will discuss various forms of qualitative research methods, approaches to research, and perspectives in methodology relative to curriculum inquiry. We will explore the intertwining of data generation, analysis, and writing. In addition, we will focus on refining data generation techniques, strategies for data analysis, data interpretation, and various forms of reporting/writing. Prior course work: Introduction to a graduate level qualitative research course or permission from the instructor. Prerequisite: Introduction to a graduate level qualitative research course. LEC

C&T 907 Critical Pedagogies (3). This course examines the theories and practices of several educational orientations that comprise "critical pedagogy." Students examine the historical roots and evolution of this broad orientation toward education. Recurrent themes and issues from the past to the present are discussed in relation to school and society, and teachers and students. Students completing the course should be able to analyze educational phenomena through a critical theoretical lens. Open to all doctoral students and advanced masters students with instructor permission. LEC

C&T 910 Research Seminar in English Education (3). This course will focus on both the conduct and findings of research related to English/Language Arts Education. Its purpose will be to foster discussion among students concerning paradoxes that have shaped the field of English/Language Arts as well as encourage critical thinking of the ways in which these paradoxes are evident in research and teaching. Prerequisite: Consent of instructor. Each student, a representative of the cooperating agencies, and the instructor will develop a research reading list on a topic of interest related to research in English/Language Arts Education and/or the writing of an individual research proposal. Prerequisite: Teaching experience in secondary or equivalent. Open only to doctoral students and advanced masters students with instructor permission. LEC

C&T 920 Evaluation of Research in Reading (3). LEC

C&T 944 Diagnosis and Evaluation of Instruction in Higher Education (2-3). The course will focus on (1) a review of the practical and theoretical problems of developing, in institutions of higher education, programs for the diagnosis and/or evaluation of classroom instruction, including use of videotape feedback for diagnosis, and the development of surveys for evaluation for diagnosis of teaching, and (2) the importance of careful administrative and review procedures as the evaluation of instruction becomes more formalized. Open only to graduate students. A field experience credit of two credit hours will be awarded to those enrolled in the laboratory section of the course. LEC

C&T 951 Research and Evaluation in Mathematics and Science (3). This course introduces students to the processes of planning, conducting, and evaluating mathematics and science research. The course also emphasizes the methods and techniques used in both quantitative mathematics and science research and evaluation methodologies. Prerequisite: A PRE course in statistics. LEC

C&T 960 Theory and Research in Social Studies Education (3). The purpose of this graduate level course is to stimulate and communicate systematic research and thinking in Social Studies Education. Its purpose is to foster the creation and exchange of ideas and research findings that will expand knowledge about purposes, conditions, and effects of schooling and education about society and social relations. LEC

C&T 968 Readings in Educational Research (3). A survey of research in elementary, secondary, and higher education economic education. After initial, mutual readings, and discussions, class members will determine a list of broad research questions around which we will focus our readings. Each student is responsible for developing a reading list on one of the topics and reporting on selected readings. Class meetings will focus on summarizing and critiquing published research. Purpose of this course is to prepare doctoral students for comprehending research and dissertation literature. LEC

C&T 994 Advanced Topics (1-3). A special course of study to meet current needs of education professionals — primarily for post-master’s level students. LEC

C&T 995 Field Experience in: (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the student’s presence and conduct in the identified setting(s). The nature and evaluations of the field experience will be prepared independently by the student, a representative of the cooperating agencies, and the adviser. Open only to advanced students. Field experience credit in any one semester may not exceed five credit hours, and total credit may not exceed nine credit hours.

C&T 996 College Teaching Experience in: (2-3). To meet the college teaching experience requirement for doctoral programs, a student shall engage in a semester-long, planned, instructional activity that shall include college classroom teaching and/or supervision. Planned activities shall be done in conjunction with the member of the faculty who will supervise the experience. The activity shall be done under the supervision of a member of the University of Kansas faculty or by an individual or individuals designated by the candidate’s committee. FLD
Individual program concentrations may require additional application materials. Please consult the appropriate program adviser. The following application deadlines apply:

**Educational Administration**
- Summer: Master’s and doctoral applicants .................................................. March 1
- Higher Education
  - Fall: Master’s applicants seeking internships outside of Housing .......... February 1
  - Fall: Master’s applicants seeking Housing internships or not needing internships .............................. March 5
  - Fall: Doctoral applicants ........................................................................... July 1
  - Spring: Doctoral applicants ........................................................................ November 1
  - Summer: Doctoral applicants ................................................................. March 1

**Foundations of Education**
- Fall: Master’s and doctoral applicants ..................................................... July 1
- Spring: Master’s and doctoral applicants .................................................. November 1
- Summer: Master’s and doctoral applicants ................................................. March 1

**Policy Studies**
- Fall: Doctoral applicants ............................................................................ July 1
- Spring: Doctoral applicants ......................................................................... November 1
- Summer: Doctoral applicants ..................................................................... March 1

**Master’s Degree Programs**
The master’s program in educational administration prepares graduates for positions of public school leadership and licensure at the building level. The master’s program in higher education prepares graduates for entry-level positions in college and university settings. The master’s program in foundations of education is for school professionals and others who wish to study the history, philosophy, and sociology of education. Please refer to the appropriate program brochure or the Web site for information about requirements for each degree.

**Doctoral Degree Programs**
The Ed.D. trains educational practitioners to understand and apply the most advanced knowledge to their work. The Ph.D. prepares scholars for roles as professors, policy makers, or researchers who are qualified to contribute theoretically grounded, original research.

All doctoral students must complete a program that provides a broad understanding of educational policy and leadership as well as a concentration in educational administration, higher education, foundations of education, or policy studies. A general description of each concentration is given here. Request the appropriate program brochure or visit the Web site for specific information on courses and requirements for each area.

**Educational Administration.** The educational administration concentration prepares teachers and administrators for school district leadership roles. Studies stress fundamental fields of knowledge and educational policy development necessary for effective leadership of school districts. The Ed.D. leads to licensure at the district level. Students pursuing this concentration must take course work in the summer.

**Foundations of Education.** The foundations of education area features a broad examination of educational theory and its practical application on local, national, and international levels. Emphasis is placed on social, philosophical, historical, comparative, and interdisciplinary inquiry into the relationship between human aspirations and the aims and methods of education. Courses of study are flexible and reflect the particular needs and aspirations of each student.

---

The Department of Educational Leadership and Policy Studies offers doctoral programs in educational administration, foundations of education, higher education, and policy studies.

The school's microcomputer laboratories help prepare students to use microcomputers in administrative, instructional, and research applications.

KU’s Edwards Campus is at 12600 Quivira Road, Overland Park, KS 66213-2402, phone (from Lawrence): 864-8400 or (913) 897-8400, http://edwardscampus.ku.edu.
Higher Education. The concentration in higher education provides current and prospective college or university staff members and administrators with theoretical and practical knowledge of higher education as a complex human activity. The program includes required and elective courses in the concentration, in a cognate area (Ph.D.), and in practicum or field research (Ed.D.).

Policy Studies. The education policy studies concentration features a multidisciplinary approach to policy analysis. Students prepare for roles as researchers, policy analysts, higher education faculty, and educational leaders through individualized programs. Each student takes courses from two or more of the following disciplines or fields: (1) the history and development of the department and, depending on interest, other relevant courses in social sciences.

Basic and applied research skills, including statistics, research design, and related options appropriate to the degree, are required for the Ph.D. and Ed.D. Specific descriptions of research requirements may be obtained from the school. Candidates for the Ph.D. and Ed.D. must complete the School of Education doctoral core.

Educational Leadership and Policy Studies Courses
ELPS 550 Childhood and Youth in America (3).
ELPS 558T Managing Schools (1-5).
ELPS 652 Residential Staff Skill Enhancement and Administration (2-3).
ELPS 715 Understanding Research in Education (3). This course introduces the concepts and skills involved in understanding and analyzing research in education and related areas. The course provides an overview of basic, general knowledge of various research methodologies. Students should expect to study much of this material in greater depth through additional course work before being prepared to conduct independent research. However, this course should enhance their ability to locate, read, comprehend, and critically analyze research articles and reports. Topics in the course include quantitative and qualitative methods and designs, historical and descriptive research, and program evaluation. Prerequisite: Admission to graduate standing in the School of Education.
ELPS 737 The Governance and Organization of Schools (3). This course provides the prospective teacher with an overview of the role of various levels of government in controlling schools, 2) the composition and functioning of school boards, 3) the way schools are funded, 4) the laws affecting school operations and teachers’ jobs, 5) the ethical responsibilities of teachers, 6) the role of teacher unions and associations, and 7) the terms of teachers’ employment. LEC.
ELPS 743 Foundations of Multicultural Education (3). This course provides students with an understanding of multicultural education as an instructional concept, educational reform movement, and systemic process meant to ensure educational equity for all people, especially those who have been inadequately served and/or historically discriminated against because of their racial/ethnic or linguistic backgrounds, gender or sexual orientation, socio-economic status, and special needs. Students will examine traditional approaches to classroom management that inform the practice of multicultural education and explore the contribution of various social sciences to the field. LEC.
ELPS 745 Sociology of Education (3). This course will provide an introduction to the sociology of education. This course is designed to fulfill the doctoral core requirement for social, historical and philosophical foundations of education. Specific topics will include: conflict over the purposes of education; how those purposes are or are not translated into actual classroom life; how educational systems have developed historically, how status, and more specifically race, class and gender relations, affect student experiences; and contemporary policy and reform movements. LEC.
ELPS 750 Principalship (3). An introduction to the role, responsibilities, expectations and major duties of elementary, middle, and high school building administrators. Students are presented typical problems faced by school administrators through simulations and role playing and are expected, through reflection and discussion, to develop viable solutions. LEC.
ELPS 751 Educational Finance (3). A description and analysis of national, state, and local strategies for the financial support of education, utilizing social, economic, legal, and political frameworks. Particular attention to the application of revenue base and distribution at the local and state level for public school operations, with analysis of how these principles apply to Kansas. Designed for the wide variety of educational practitioners regardless of organizational and degree level. Prerequisite: Access to graduate study. LEC.
ELPS 752 Education Law (3). A study of legal principles and issues affecting educational policy making and practice with emphasis on student and teacher rights, equity, and the administration of schools. Prerequisite: Admission to graduate study. LEC.
ELPS 753 Introduction to Personnel Administration in Education (3). An overview of the theoretical and practical aspects of recruitment, selection, training, and development, evaluation, compensation, equal employment opportunity, and labor relations. LEC.
ELPS 754 Analysis of Administrative Problems (3). An introduction to various methods of administrative evaluation strategies and problem solving; principles for the analysis of qualitative and quantitative data; models of problem resolution and decision making; and communication methods appropriate for differing audiences. Students will build basic computer, library, decision and communication skills. The course is offered to students who need to develop future administrative practice and subsequent coursework. LEC.
ELPS 755 Human Resource Management (3). An overview of the theory and practice of the management, recruitment, selection, compensation, placement, and development of personnel in the school setting. LEC.
ELPS 756 History of Educational Thought (3). An examination of the major ideas that have shaped the practice of education. Emphasis is placed on understanding the student with the development of a coherent and consistent personal philosophy of education upon which administrative practice can be based. LEC.
ELPS 757 Education in American Society (3). A study of the roles and goals of education in the United States, emphasizing schools and their environments, students, teachers, administrators, and parents, and the culture of schools. LEC.
ELPS 764 Social Context of Urban Education (3). This course examines education in urban communities through the foundational disciplines of history, philosophy, and education. Historical processes and events are presented against the backdrop of social and political contexts of American cities that affect the educational process. LEC.
ELPS 770 History and Philosophy of Education (3). A comprehensive study of influential persons and movements in the development of educational thought, Eastern and Western, from ancient times to the present. Emphasis on those ideas and historical roots which are relevant to contemporary issues in teaching and school administration. LEC.
ELPS 771 Philosophy of Education I (3). An analytic inquiry into basic philosophical positions and issues relevant to education. The difference between ELPS 770 and ELPS 771 is that the latter is topically arranged and does not necessarily follow a historical sequence. It normally proceeds by problems and schools of thought. LEC.
ELPS 772 Philosophical Problems in Comparative Education (3). A study of significant philosophical problems encountered when comparing educational systems. Special emphasis will be placed on the implications of axiological analysis for educational theory and practice in different areas of the world related to different philosophical, social, and political contexts of the international and world educational systems. LEC.
ELPS 773 School and Society in Comparative Education (3). Analysis of the role of culture in comparative education. It will be studied by different philosophies or schools of thought, such as Marxism, phenomenology, empiricism, pragmatism, and linguistic analysis. LEC.
ELPS 774 Modern Educational Theorists (3). An in-depth study of prominent European and American thinkers who have contributed to educational thought (e.g., Nietzsche, Piaget, Kohn, Rousseau, Pestalozzi, Herbert, Froebel, Montessori, Nietzschke, Freud, Piaget, Ortega Gasset, etc.). Prerequisite: ELPS 770 or ELPS 771 is recommended. LEC.
ELPS 775 History of Education and Culture in America (3). A study of the relation between education and cultural change from the past to the present. American schools are considered in the wider context of cultural and social change. LEC.
ELPS 776 History of Childhood and Youth in America (3). An exploration of changing attitudes toward children and youth, their subjective experience, their impact on adults, and the conditions that shaped their development. Special attention will be given to the relationship between the changing nature of childhood as a social and cultural category and the development of the education profession. LEC.
ELPS 777 Problems in Contemporary Educational Theory (3). Select explorations into such provocative and problematic issues as historical and cultural development; social science in comparative education; non-formal education, etc. Prerequisite: ELPS 770 or ELPS 771 is recommended. LEC.
ELPS 778 Historical Inquiry in Education (3). This course will provide an introduction to the methodology of historical research in education. This course is designed to fulfill the doctoral core requirement for students interested in doing this type of research. Specific topics will include: the historiography of educational history; working with primary and secondary documents; oral history as method and documentation; quantitative approaches to history; constructing historical narratives; the question of interpretation. LEC.
ELPS 780 Introduction to Higher Education Administration (3). This course is designed for beginning master’s degree students and for doctoral students who have had no previous administrative experience in college or university settings. Students will be introduced to the function and responsibilities of major administrative divisions of a college or university and to the major tasks of administration: planning, programming, budgeting, staffing, managing. An emphasis will be placed on current issues facing higher education and students will be introduced to the major journals of the field. As part of the course requirements, students will spend some time familiarizing themselves with one or more administrative offices on a college campus. Prerequisite: Admission to study in higher education at the graduate level. LEC.
ELPS 781 Student Affairs Administration in Higher Education (3). This course is designed to include the study of the history and development of student services in higher education, the role and function of the student affairs administrator, contemporary issues and problems, and an understanding of the organization and role of student affairs administration within higher education settings. Prerequisite: Admission to the higher education program or permission of instructor. LEC.
ELPS 798 Special Course: (1-5). A special course of study to meet current needs of education professionals—primarily for graduate students. LEC.
ELPS 850 Educational Facilities (3). A study of the principles and processes of developing educational facilities on campus. Focus on elements of educational planning that precedes and provides the basis for architectural planning. Among topics considered are plant utilization analysis, enrollment projections, site and equipment needs, fiscal and legal constraints, environmental factors, and the impact of design on user needs. Design and construction of educational buildings, and roles of the central and central office level administrators. Prerequisite: Admission to graduate study. LEC.
ELPS 851 Supervision of Student Teaching (2). A study of the organization and functions of student-teaching programs. Emphasis on the development of effec-
behavior, and psychology. We consider various aspects of leadership and analyze the implications of these findings for college and university administrators and faculty. Topics include research and theory concerning the college student experience, the diverse nature of the student body and its implications for teaching and learning, the role of higher education in American social and economic development, and the impact of institutional philosophies and priorities on the educational experiences of students.

ELPS 852 School Resource Management (3). An examination of the sources and uses of fiscal resources in education including underlying concepts from economic theory, the role of fiscal policies in state funding formulas, and school budgeting and accounting practices. LEC

ELPS 853 Staff Evaluation and Development (3). An examination of current trends in personnel evaluation with a focus on clinical supervision and adult developmental theories. Students will participate in simulation exercises to develop skills in classroom observation, conferencing techniques, evaluation of teaching artifacts, and the construction of staff development plans. LEC

ELPS 854 The Student in Society (3). A study of children and youth with particular emphasis on demographic characteristics of the population served by schools and implications for social services. The course relates to the social and economic context of schools. LEC

ELPS 855 Teacher Evaluation (3). Teacher evaluation is based on clinical, empirical and theoretical information related to effective teacher evaluation behavior from the administrative perspective. It is intended to provide exposure to competencies essential to effective evaluation of teaching performance. Evaluation knowledge, skill and performance are acquired and developed through reading, discussion, active teaching of content related to teacher evaluation and practical observation, recording and conferencing skills. A variety of approaches is considered, but behaviorally-anchored measurement of teaching behavior is emphasized. Opportunities and needs for improvement are identified with the assistance of video-taped diagnosis of conferencing behavior. Prerequisite: Two of the following: ELPS 750, ELPS 752, ELPS 753, or C&T 840. LEC

ELPS 856 Law and Special Education (3). A study of the history and development of special education. The issues include, without limitation, education, treatment and non-treatment. Not valid for credit toward professional education. Prerequisite: ELPS 750. LEC

ELPS 858 Professional Ethics, Public Values, and Disabled Citizens (3). This course addresses the issues that professionals (educators, physicians, allied health providers, attorneys and others) and families of disabled people face in the context of public values and attitudes and rules of law. The issues include, without limitation, education, treatment and non-treatment. Not valid for core requirement in history and/or philosophy of education. (Same as SPED 852.) Prerequisite: SPED 851 or SPED 780 or permission of instructor. LEC

ELPS 857 Disabled Citizens, Public Policy, and Policy Analysis (3). To train students to analyze public policy that affects disabled citizens, various models of analysis are brought to bear on federal policy (education, transportation, housing, institutionalization, protection of individual rights, development, vocational rehabilitation, and others). Not valid for core requirement in history and/or philosophy of education. (Same as SPED 852.) Prerequisite: SPED 851 or SPED 780 or permission of instructor. LEC

ELPS 858 Professional Ethics, Public Values, and Disabled Citizens (3). This course addresses the issues that professionals (educators, physicians, allied health providers, attorneys and others) and families of disabled people face in the context of public values and attitudes and rules of law. The issues include, without limitation, education, treatment and non-treatment. Not valid for core requirement in history and/or philosophy of education. (Same as SPED 852.) Prerequisite: SPED 851 or SPED 780 or permission of instructor. LEC

ELPS 870 Philosophy of Education II (3). An exploration of select areas in philosophy, such as emphasis on value-theory or epistemology or metaphysics, and their implications for educational thought. The course is organized around an examination of a selected area of philosophy for each class period. Prerequisite: ELPS 870 or ELPS 771 is recommended. LEC

ELPS 871 Introduction to Qualitative Research (3). An introduction to the foundations of qualitative research methods. Students will practice qualitative approaches, and will analyze data collected during their own research. Additional topics include classical qualitative research questions, methods of fieldwork, and the design and analysis of qualitative research. This course will be conducted for monographic treatment. Prerequisite: ELPS 770 or ELPS 771 is recommended. LEC

ELPS 880 The Community/Junior College (3). A survey of the history and development of the community/junior college. Particularly emphasized will be the student, the faculty, the curricula, administration, and finance. The course is intended to provide a general understanding of the operation and concerns of today’s community/junior college for the current or potential community/junior college staff member. LEC

ELPS 881 Seminar in Leadership (3). The purpose of this seminar is to explore leadership in education, particularly higher education, from a variety of perspectives. Readings come from a variety of disciplinary perspectives, such as sociology, organizational behavior, and psychology. We consider various aspects of leadership and analyze the leader from a symbolic perspective, as a manager of meaning and critical change agent. We then challenge ourselves to deconstruct our leadership realities with the help of several current theories, as we prepare students to lead organizations who they will, and need to, be in the educational organizations of tomorrow. LEC

ELPS 882 Higher Education in the United States (3). The purpose of the course is to acquaint students in higher education, and students from other areas who intend to work in the post-secondary setting, with the history, philosophy and development of higher education in the United States. Particular emphasis will focus on three topics: 1) the founding of Harvard to 1965; 2) dissent, disruption, and change, 1965-1979; and 3) the future and crucial issues, the 1980’s. European higher education and its influence on the United States will be examined. LEC

ELPS 883 The College Student (3). The characteristics of college students; impact of college on student behavior, changing attitudes, values, beliefs, and the implications of recent research on traditional and new students for instructional and administrative practice. LEC

ELPS 884 Research on College Students (3). Examination of the American college student from societal, development, research, and institutional perspectives and to review the policy implications of these findings for college and university administrators and faculty. Topics include research and theory concerning the college student experience, the diverse nature of the student body and its implications for teaching and learning, the role of higher education in American social and economic development, and the impact of institutional philosophies and priorities on the educational experiences of students.
will include consideration of such topics as boardsmanship, community relations, district leadership, professional accountability, district maintenance and operations, professional employment and relationships with other agencies. The course is designed to serve the needs of those graduate students pursuing advanced study with the intent of preparing for district certification. Some students will also find the field appealing as an area for dissertation research. Prerequisite: Doctoral status in education administration or permission of instructor. LEC

ELPS 957 Educational Policy, Ethics, and Law (3). Course focuses on use of legal and moral reasoning in analysis of educational policy issues. Specific topics will vary depending on interests of instructor and students and current controversy. Examples of possible topics to be included: school desegregation, teacher collective bargaining, separation of church and school, equal educational opportunity. Prerequisite: ELPS 752, equivalent, or consent of instructor. LEC

ELPS 958 American Educational Reform Movements: Past and Present (3). An examination of the origin, nature, and consequences of educational reform in the United States. The primary goal is to attain a balanced evaluation of current educational reform. LEC

ELPS 959 Organization and Administration of Services for Exceptional Children (3). To aid administrators and prospective administrators responsible for organizing and administering programs of education for exceptional children, state and federal guidelines and regulations, legal aspects and financing of special education, planning a program, administering special services. (Same as SPED 971.) Prerequisite: Nine hours of Education including educational psychology and SPED 725. LEC

ELPS 960 Specialist Project (1-4). RSH

ELPS 970 Theory and Research in Administration (3). A survey of the theoretical and empirical literature in educational administration and the methods used to investigate these content areas. Major emphasis is devoted to developing research skills applicable in practice and to the identification of possible generic topics suitable for future dissertation work. LEC

ELPS 971 Comparative Education (2). A factual, descriptive, and analytical study of national systems of formal education, or schooling, as exemplified in contemporary educational establishments. Organizational and administrative policies and teaching practices, with emphasis on Germany, France, England, U.S.S.R., People's Republic of China and Japan. Other nations may be examined on an individual project basis. The difference between ELPS 971 and ELPS 772 is the philosophical emphasis of the latter. LEC

ELPS 972 Educational Problems in Latin America (3). Designed to meet the needs of students majoring in Latin American studies or interested in the area. Development of an awareness of the concept of cross-cultural confluence with Latin America as it relates to two of the main problems confronted by Latin American educational systems and examination of the difficulties experienced by North American educators when confronted with such problems. LEC

ELPS 980 Postsecondary Finance (3). This course is designed for advanced doctoral students in higher education, particularly those who will be preparing unit budgets or budget presentations and those who make and implement fiscal policy (e.g., financial aid offers). The course material covers different types of college and university budgeting — incremental, zero-based and formula — and their impact on university revenues, statewide coordination and its impact on programs, program duplication and funding; reenrollment and quality issues; the legislative role in budget preparation; unified and comparative management systems (e.g., WICHE and NCHEMS); and the impact of federal contracting and student aid policies. LEC

ELPS 981 Higher Education Law (3). An overview of the developing law of higher education, with emphasis on and analysis of employer-employee relationships, student-faculty/administration relationships, and the impact of federal and state regulation on these relationships. LEC

ELPS 982 Faculty in Higher Education (3). This course considers the role and circumstances of faculty in higher education including variations among different types of institutions. Topics include the history and demographics of the professoriate, the academic work environment and labor market, the role of faculty in institutional governance and policy making, and the social and political context of academia. LEC

ELPS 983 Curriculum Innovation in Higher Education (3). A study of contemporary post-secondary curriculum with particular emphasis on the nature of curriculum, the organization and structure of academic programs, the nature of change in academic communities and exemplary innovative institutions. LEC

ELPS 984 Teacher Education in the United States (2). A study of the development, issues, and programs for the preparation of teachers. Open to all regular graduate students. LEC

ELPS 985 Evaluations of Programs in Higher Education (2). Nature, objectives, and basic procedures of evaluation as applied to the various aspects of higher education. Open to all regular graduate students. LEC

ELPS 986 The Governance and Administration of Higher Education (3). A theory-based course aimed at providing an understanding of the governance and administration of academic institutions — particularly universities. Emphasis is directed toward an analysis of decision-making in these complex organizations. LEC

ELPS 993 Advanced District Leadership Internship (2). Supervised and directed experiences to enhance the necessary leadership skills of a building/district leader. Activities will include building/district level resource assessment, data analysis, professional development of teachers/principals (and district level professionals), and cooperative planning with teachers and administrators around responsibilities of curriculum, instruction, resource management and student achievement. Prerequisite: Completion (at the University of Kansas) of all certification program (M.S./Ed.D.) requirements for the Building/District Leadership Licenses. FLD

ELPS 994 Advanced Topics: (___-3). A special course of study to meet current needs of education professionals — primarily for post-master's level students. LEC

ELPS 995 Field Experience in: ___ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conferences with the student. Written summaries and evaluations of the field experience will be prepared independently by the student, a representative of the cooperating agencies, and the adviser. Open only to advanced students. Field experience credit in any one semester may not exceed five hours, and total credit may not exceed eight hours. FLD

ELPS 996 College Teaching Experience in: ___ (2). To meet the college teaching experience requirement for doctoral programs, a student shall engage in a semester-long, planned, instructional activity that shall include classroom teaching under supervision. Planning shall be done with the adviser and/or the member of the faculty who will supervise the experience. The activity shall be done under the supervision of a member of the University of Kansas faculty or by an individual or individuals designated by the candidate’s committee. FLD

ELPS 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

ELPS 998 Seminar in: ___ (1-4). LEC

ELPS 999 Doctoral Dissertation (1-15). THE

Health, Sport, and Exercise Sciences

Chair: Andrew C. Fry
Graduate Coordinator: L. Keith Tennant
1301 Sunnyside Ave., Room 104
Lawrence, KS 66045-7520, www.soec.ku.edu/hses, (785) 864-0783
Professors: A. Fry, Lumpkin, Tennant
Professors Emeriti: Osness, Zebas
Associate Professors: M. Fry, Greene, King, LaPoint
Associate Professor Emeritus: Huntsinger
Assistant Professors: Carr, Gallagher, Vardiman
Graduate work in health, sport, and exercise sciences includes an offering of courses leading to the Master of Science in Education and Doctor of Philosophy degrees. Entrance requirements include completion of an undergraduate program equivalent to programs offered by the Department of Health, Sport, and Exercise Sciences at KU and admission to graduate studies through the Graduate Division of the School of Education.

Admission
Submit your application online at www.graduate.ku.edu. Send all supporting application materials to

The University of Kansas
Department of Health, Sport, and Exercise Sciences,
HSES Graduate Admissions
1301 Sunnyside Ave., Room 104
Lawrence, KS 66045-7520

Master of Science in Education Degree Programs
The Master of Science in Education with a major in physical education is offered with specializations in exercise science, health science, pedagogy, and sports studies. The degree program requires 30 hours for the thesis option or 36 hours for the nonthesis option.

KU’s Student Recreation Fitness Center, www.recreation.ku.edu, features an indoor climbing wall, gymnasiums, a martial arts center, racquetball/squash courts, a walking track, and facilities for basketball, badminton, handball, football, soccer, and rugby.
All students must take the Graduate Record Examination to be considered for admission to either a thesis or a nonthesis master’s program. Students must score at least 450 on both the verbal and quantitative sections (must have a total of 1100) and 4.0 on the written analytical section. Admission is selective and is determined by the selection committee for the specialization to which the student is applying. The selection committee assigns an adviser/mentor to each admitted master’s student (thesis and nonthesis).

Any admitted master’s student who does not have a minimum grade-point average of 3.0 but has at least a 2.75 may be admitted on probationary status. These students must earn a minimum of a B in the first three courses (9 hours) they take (assigned by the adviser/mentor). Failure to achieve this level will result in dismissal.

**Doctoral Degree Programs**

The Doctor of Philosophy degree is offered with emphases in exercise science, health science, pedagogy, and sport management. Students must interview with a faculty adviser in the intended emphasis before admission.

Regular doctoral admission requires GRE scores of 500 on both the verbal and quantitative sections (must have a total of 1100) and 4.5 on the written analytical section. A minimum grade-point average of 3.5 in master’s degree work is required. Pre-aspirant status requires the prospective doctoral student to earn a grade-point average of at least 3.5 in the first 12 credit hours.

With the adviser, each student develops a course of study consistent with the student’s needs and the faculty’s expertise. This includes major courses, minor courses, core courses, and research skills.

**Research Skills.** Research skills must be completed before the aspirant is admitted to the comprehensive examinations. Twelve hours of statistical methods and demonstration of statistical application techniques in a research problem are required as evidence of research skills. The Ph.D. requires competence in two of the following three research skills: (1) reading knowledge of a foreign language; (2) computer programming, analysis, and processing skills; or (3) additional statistics including multivariate or nonparametric techniques.

Students should obtain specific instructions and guidelines for graduate degrees from the department.

**Laboratories and Facilities**

The department maintains excellent laboratories for student and faculty research, including biomechanics, motor development/adaptive, and applied physiology.

### Health, Sport, and Exercise Sciences Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSES 500</td>
<td>Student Teaching in: ____ (14).</td>
<td></td>
</tr>
<tr>
<td>HSES 501</td>
<td>Seminar in Teaching Health and Physical Education (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 502</td>
<td>Camp Leadership and Counseling (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 515</td>
<td>Assessment of Motor Development and Motor Control of Exceptional Children (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 528</td>
<td>Techniques of Athletic Training I: Lower Extremity (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 529</td>
<td>Techniques of Athletic Training II: Upper Extremity (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 558</td>
<td>Creative Movement and Dance Appreciation (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 561</td>
<td>Organization and Administration of Athletic Training (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 562</td>
<td>Athletic Training Practicum V (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 563</td>
<td>Senior Capstone in Athletic Training (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 564</td>
<td>Athletic Training Practicum VI (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 565</td>
<td>Methods and Materials in Health Education (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 573</td>
<td>Introduction to School and Community Health (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 580</td>
<td>Internship in: ____ (2-16).</td>
<td></td>
</tr>
<tr>
<td>HSES 582</td>
<td>Athletic Training Practicum II: Management and Treatment (4).</td>
<td></td>
</tr>
<tr>
<td>HSES 583</td>
<td>Athletic Training Practicum III: Rehabilitation (4).</td>
<td></td>
</tr>
<tr>
<td>HSES 584</td>
<td>Athletic Training Practicum IV: Senior Sport Experience (4).</td>
<td></td>
</tr>
<tr>
<td>HSES 598</td>
<td>Special Course: ____ (1-5).</td>
<td></td>
</tr>
<tr>
<td>HSES 605</td>
<td>Administering Health-Related Programs (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 608</td>
<td>Pool and Spa Management (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 618</td>
<td>Health Aspects of Aging (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 640</td>
<td>Applied Sport and Performance Psychology (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 654</td>
<td>Management and Treatment Techniques of Athletic Training (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 656</td>
<td>Rehabilitation Techniques of Athletic Training (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 658</td>
<td>Organization and Administration Techniques of Athletic Training (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 670</td>
<td>Introduction to Biomechanics (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 671</td>
<td>Applied Biomechanics (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 672</td>
<td>Exercise Physiology (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 673</td>
<td>Clinical Fitness Evaluation Techniques (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 674</td>
<td>Exercise Biochemistry (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 678</td>
<td>Introduction to Energy Balance and Weight Management (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 680</td>
<td>Adaptive Physical Education and Recreation (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 704</td>
<td>Principles of Physical Education (2).</td>
<td></td>
</tr>
<tr>
<td>HSES 713</td>
<td>AIDS and STDs: Facts of Life (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 714</td>
<td>Motor Development During Growth (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 715</td>
<td>Understanding Research in HSES (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 717</td>
<td>Motor Education and Development (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 719</td>
<td>Tests and Measurements in Physical Education (3).</td>
<td></td>
</tr>
<tr>
<td>HSES 720</td>
<td>Financing and Marketing Leisure Services (3).</td>
<td></td>
</tr>
</tbody>
</table>

The Department of Health, Sport, and Exercise Sciences offers the Master of Science in Education and Doctor of Philosophy degrees with emphases in exercise science, health science, pedagogy, and sports studies.
to the physiological systems and current research that may impact the under-
standing of the course. Prerequisite: A basic course in exercise physiology.
LEC

HSES 780 Internship in Teaching Physical Education: (1-16). A supervised 
internship experience leading to initial physical education teacher certification.
The student assumes the total professional role as a teacher of physical education 
in an approved school setting. FLD

HSES 781 Internship in Teaching Health Education: (1-16). A supervised internship 
experience leading to initial health education teacher certification. The student assumes 
the total professional role as a teacher of health education in an approved school setting. FLD

HSES 795 Traditions and Principles in Health Education (3). This course is designed 
to explore the philosophy and principles which provide the foundation of health educa-
tion as an academic discipline. Specific topics include: history of the profession, theories of 
health behavior and change; principles of learning applied to health communica-
tions, health promotion practices, professional preparation, and the integration of 
philosophical and ethical ideals into program planning and implementation. LEC

HSES 798 Special Course: (1-5). A special course of in-depth study explor-
ing current trends and issues in health and physical education - primarily for un-
dergraduates. LEC

HSES 801 Sport Facilities (3). The purpose of this course is to study current de-
velopments and trends in the financing, programming, design, and construction 
of facilities for intercollegiate athletics and professional sports. Prerequisite: Ad-
mitted to graduate school. A course in the administration/management of sport 
or consent of the instructor. LEC

HSES 802 Injury Prevention in Exercise and Sport (3). A course designed to explore 
strategies for cutback management, economic analyses, funding sources, 
and contract services are a few of the selected topics. Prerequisite: Six hours of ap-
proved exercise science setting. Students will gain experience through a 
hand-on approach via clinical and/or research settings. The specific type of in-
ternship experience will be agreed upon by the student and their academic ad-
viser. Prerequisite: Successful completion of at least 24 graduate credit hours. LEC

HSES 803 Comparative Physical Education (3). A comparison of physical educa-
tion and sports programs around the world. Emphasis on historical background, 
educational philosophy, teacher preparation, administration, programs and facili-
ties in representative countries in Asia, Europe, Africa, South and North America. Prerequisite: Nine hours of education including educational psychology. LEC

HSES 804 Psychological Effects of Sport and Physical Activity (3). This course will be 
primarily concerned with the psychological effects of physical activity. Particular atten-
tion will be paid to the influence of exercise on behavioral manifestations such as state 
of alertness, aggression, and emotional expression. This course will also examine 
the normal adult, and the psychiatric patient. Methodological considerations involved in 
the assessment of psychological effects resulting from sport and physical activity will be 
reviewed. Prerequisite: A course in sport psychology or consent of instructor. LEC

HSES 805 Laboratory Experiments and Analysis—Exercise Physiology (3). Students 
will learn the techniques of operating various types of laboratory equipment and 
will conduct small-scale lab experiments in areas such as respiration, circula-
tion, metabolism, strength, neuromuscular function, cardiac function, and body 
composition. Special emphasis will be placed on laboratory techniques of assess-
ing physical fitness. Prerequisite: A course in exercise physiology. LEC

HSES 806 Stress Management (3). The long range objectives of this course are to 
asist students in gaining stress management knowledge; to help them to formulate im-
portant decisions on various aspects of their lives, and to then apply the developing constructs in their lives with a sense of purpose and self-respon-
sibility. Prerequisite: Two courses in health education or consent of instructor. LEC

HSES 807 Current Literature in Exercise Physiology (2). A wide range of topics 
from the exercise physiology discipline is broad enough to be disseminated in one 
course. Students will present reports to the group centered on current research findings with dis-
cussion aimed at application of these results to physical exercise and training. Pre-
requisite: A basic course in exercise physiology or consent of instructor. LEC

HSES 808 Biomechanics of Human Movement (3). This course will examine the move-
ments and the structure and function of human beings by means of the methods of me-
chanics. An emphasis will be placed on the two primary goals of biomechanics: per-
formance improvement and injury prevention and rehabilitation. Topics to be covered 
include the kinematics and kinetics of human movement, muscle mechanics, bone, 
and joint mechanics, and the biomechanics of musculoskeletal injury. Prerequisite: Courses 
in calculus, physics, anatomy, and biomechanics, or consent of instructor. LEC

HSES 809 Laboratory Experiences in Biomechanics (3). This course will examine the 
instrumentation and measurement techniques used to collect and analyze biomechanical and kinesio-
logical data. Prerequisite: One course in biomechanics, or consent of instructor. LEC

HSES 810 Advanced Exercise Physiology (3). An advanced study of the physio-
logical and biomechanical aspects of muscular, cardiovascular, and respiratory 
function when the human is engaged in exercise. Topics include: Thermoregula-
HSES 811 Current Research Literature in Leisure Behavior (3). This course is de-
signed to analyze critically the literature on leisure behavior. Students will review certain key research projects collectively as well as branching individually into special interest areas. Prerequisite: Six hours of approved recre-
ation course work or consent of instructor. LEC

Health, Sport, & Exercise Sciences
HSES 812 Current Issues in Health Education (3). This course is designed to ana-
yze critically the literature in health education. The range of topics for discussion will vary from literature in popular readings to scientific reports in various jour-
nals. The relevance of these materials will provide the students with a framework to
develop their own philosophy with regard to health education. The course will be
considered a foundation for the study of the behavioral principles that influence
health and exercise. Prerequisite: A course in methods and materials in health education. LEC

HSES 813 Motor Control of Human Movement (3). This course will examine the neuro-
physiological characteristics and the development of the principles of the control of
human voluntary movement. Students will learn not only how to look at the individual but also
the task and the environment to fully understand the factors affecting the control of
movement and in movement analysis. Prerequisite: A course in community health or consent of instructor. LEC

HSES 814 The Implementation of Health Education Programs (3). The content of this
course is designed to assist elementary and secondary school personnel with the
implementation of health education programs. Specific topics to be discussed will in-
clude: the concepts of health, principles of curriculum development, content selec-
tion, organization of the health program, current issues, actual practices, teaching in
controversial areas, the implementation of effective health instruction, and legisla-
tion. Prerequisite: A course in methods and materials in health education. LEC

HSES 815 Assessing Motor Development of Exceptional Children (3). Standard-
ized motor development tests and methods of interpreting the results will be presented.
Prerequisites: A course in community health, or consent of instructor. LEC

HSES 816 Health Education for the School Nurse (3). A course especially de-
signed for the nurse in a school setting. Emphasis will be placed on improving
and updating the school nurse’s ability to promote and maintain students’ health.
Specific topics covered will include: an overview of school health; the role of the
school nurse; legal aspects; and the results interpreted. Prerequisite: Courses in educational measurements and
motor development or consent of the instructor. LEC

HSES 817 Practical Aspects of Aerobic and Resistance Training (3). This course will be
a discussion of various concepts related to aerobic and resistance training. By the end
of the semester, the student should be able to demonstrate an understanding of informa-
tion presented in this course by achieving satisfactory evaluations of presentations, pa-
pers, and an examination of the following topics: energy metabolism, general adapta-
tions of aerobic and resistance training, exercise techniques for aerobic and resistance
training, periodization of training, testing and evaluation of aerobic and resistance train-
ning performance, and exercise prescription for aerobic and resistance training. Prerequi-
site: Undergraduate course in exercise physiology or consent of instructor. LEC

HSES 818 Legal Aspects of Public Health Education (3). This course is designed to
enhance understanding of the variety of legal issues which affect health educa-
tors and their audiences. Specifically, this course will survey federal, state, and
local public health laws and regulations which may predispose health education
content and the health educator’s actions. Legislation will be analyzed and the
practical impact of the health educator upon the legislative process will be empha-
sized. Prerequisite: A course in community health or consent of instructor. LEC

HSES 819 Clinical Evaluation, Exercise Prescription, and Electrocardiography (3).
This course will examine the use of clinical evaluation and exercise testing and
electrocardiographic stress tests and the physiologic changes that relate to certain kinds of pathol-
gy. It will also address individualized exercise prescription and the various meth-
ods used to measure tissue oxygenation. The content of the exercise prescription will be discussed in detail and applied to exercise inter-
vention strategies. The fundamentals of data collection using the electrocardiogram and the
fundamentals of electrocardiogram analysis will be also studied during rest conditions and during exercise conditions. The course will apply physiologic prin-
ciples to a clinical setting where exercise is used for evaluation and intervention strategies.
Prerequisite: A basic course in exercise physiology with a laboratory. LEC

HSES 820 Current Literature Review in Biomechanics (2). An overview of current
kinesiology topics from major sources such as skill techniques, equip-
ment design, sport safety, and research tools and techniques. Readings will be cri-
tiqued and discussed. Emphasis will be given to the interpretations of research find-
ings for the researcher, teacher, or coach. Prerequisite: A course in kinesiology
with biomechanics emphasis or permission of instructor. LEC

HSES 821 Program Development in Physical Education and Sport (3). A study of the
systematic process used to develop programs in physical education and re-
lated areas. A variety of planning models will be presented and discussed for both short-
and long-term planning in sport and physical education. Prerequisite: Six hours in physical education or consent of instructor. LEC

HSES 822 Thesis Design and Writing in Health, Sport, and Exercise Sciences (3). A study of contemporary trends in the field of Health, Sport, and Exercise Sciences,
with particular emphasis in the development and writing of original re-
search in Health, Sport, and Exercise Sciences. LEC

HSES 823 Behavior Modification in Health and Exercise (3). This course will exam-
ine the behavioral principles that influence health and exercise practices. Theories of
human behavior that relate to health and exercise participation will be discussed and
a foundation for studying behavior change. Society influences will be strongly em-
phasized. Course topics will include exercise determinants, motivation, media rep-
resentation, negative behaviors, self-efficacy, social support, and effective promotion strategies. Prerequisite: Admission to Graduate School. LEC

HSES 824 Epidemiology and Concepts of Disease Causation (3). This course in-
volves the study of the etiology and natural history of infectious and non-infect-
ious diseases including vector control, host defenses and resistance, investigation
of disease outbreaks, mental health and public health. The course deals with
detailed analytic and descriptive epidemiology and their implications for improving our
understanding of the major public health and infectious disease problems. Prerequisite: HSES 810 or equivalent. LEC

HSES 825 Skeletal Muscle Physiology (3). This course will provide the student with
an in-depth study of the structure and development, contractile mechanics, and
neuromuscular system as it relates to the skeletal musculature. Structure and Devel-
opmental aspects will be selected, administered to exceptional children, and
the components responsibilities is highlighted. Prerequisite: Admission to Graduate School. LEC

HSES 828 Sport Finance (3). A study of the principles and applications of finance in
the world of sport. Prerequisite: Admission to Graduate School. Consent of instructor. LEC

HSES 830 Socio-Cultural Dimensions of Sport (3). Current literature concerning
the impact of American social values and cultural patterns of sport and physical
activity on the lives of men and women will be studied. Prerequisite: HSES 810 or equivalent. LEC

HSES 831 Ethics in the Sport Industry (3). Study of the history, theory, models, and
applications in the ethical aspects of the sport, entertainment, and perform-
ance. Prerequisite: Admission to Graduate School. LEC

HSES 832 Assessment of Fitness, Skills, and Programs for Grades K-12 (3). The
study of techniques for the assessment of fitness and sports skills among K-12 stu-
dents. The use of performance tests and assessment tools will be emphasized. Stu-
dents will also discuss evaluative techniques for physical education curricula and
programs. Prerequisite: 15 hours of physical education. LEC

HSES 833 Public Health Aspects of Exercise (3). This course describes the time-
line for phylogenetic adaptations to long-term physical activity. It describes the ef-
facts of physical activity on chronic disease. It describes, from a population pers-
pective, the effects of physical activity on the health of the nation. Prerequisite: 12
hours of HSES courses, or equivalent, or consent of instructor. LEC

HSES 834 Energy Balance and Weight Management (3). This course describes
methods used for energy intake regulation, energy expenditure, energy balance
management (increase/decrease) with emphasis on weight loss. Prerequisite: 12 hours of HSES courses, or equivalent, or consent of instructor. LEC

HSES 836 Physical Education Curriculum Models (3). An examination of the ele-
ments and processes of curriculum development in physical education for elemen-
tary, secondary, and post-secondary institution, and the institutional and profes-
sional issues that affect these processes. A study of contemporary curricula struc-
tures in regard to planning, implementation, and evaluation of K-12 curricula and
physical education curriculum models. Prerequisites: A course in physical education curriculum, or equivalent. LEC

HSES 838 Administration of Recreational Sports Programs (2). Organization and
management theory and techniques for administering intramural sports programs in
an institutional or business setting. Philosophy and programming, facility usage, and official
discussed in relation to intramural programs. Current topics in intramurals will be researched and reviewed. Prerequisite: A course in
administration of physical education, or equivalent. LEC

HSES 840 Leadership and Management in Sport (3). A survey of leadership and
management principles and techniques utilized by administrators. Philoso-
phy, leadership, management, communications, motivation, ethical and legal issues are
also studied. Students are provided with views on these topics by current leaders in
the field. Prerequisite: Admission to Graduate School. Consent of instructor. LEC

HSES 842 Sports Marketing (3). This course has been developed to help students gain
an understanding of the scope of sport marketing in the many different sports and exer-
cise settings. The students will also be exposed to the reasons and methods of fund rais-
Many other areas that will be covered: methods of selecting the appropriate market-
ing strategy, significance of sports marketing, preparing a marketing plan, and becom-
ing familiar with the resources available on the Internet in the marketing area. Prerequi-
site: Admission to graduate school. Consent of instructor. LEC

HSES 850 Analysis Techniques for Health, Sport, and Exercise Sciences Laboratory and
Field Data (3). Techniques for analyzing data gathered in Health, Sport, and Exercise
Sciences laboratories and field studies will be presented in this course. Techniques for the recom-
mandation and use of data, appropriate statistical methods for analysis of data, use of computer software, and computer programming for analysis and reporting results of data will be also included. Prerequisite: PRE 710, PRE 720, or PRE 725. LEC

HSES 865 Innovative Methods for Teaching Rhythms and Physical Education (3).
An advanced study of how to develop and conduct teaching methods and
techniques that can be used to provide students in physical education classes the maxi-
mum opportunities for developing motor and rhythmic skills in a quality learn-
ing environment. The focus of this course will be on following: rhythm, dance, games, modified sports, and cooperative activities. Research on
in teaching methods in physical education will be discussed and analyzed as they re-
late to the different content areas and developmental levels. Prerequisite: Completed
12 hours in physical education or consent of instructor. LEC

HSES 865 Innovative Methods for Teaching Rhythms and Physical Education (3).
An advanced study of how to develop and conduct teaching methods and
techniques that can be used to provide students in physical education classes the maxi-
mum opportunities for developing motor and rhythmic skills in a quality learn-
ing environment. The focus of this course will be on following: rhythm, dance, games, modified sports, and cooperative activities. Research on
in teaching methods in physical education will be discussed and analyzed as they re-
late to the different content areas and developmental levels. Prerequisite: Completed
12 hours in physical education or consent of instructor. LEC

THE UNIVERSITY OF KANSAS 2001-2009

106
HSES 866 Contemporary Trends in Elementary and Secondary Physical Education (3). An in-depth study into the research and other forms of literature will be made to study and examine the latest trends in elementary and secondary school physical education. Games, activities, dances, and rhythms will be presented and discussed relative to developmental levels of students grades K-12. Prerequisite: A methods course in teaching physical education or consent of instructor. LEC

HSES 872 Exercise and the Cardiovascular System (3). This course will be a discussion of various concepts specifically related to exercise and the cardiovascular system. By the end of the semester, the student should be able to demonstrate an understanding of the interaction of exercise and cardiovascular system by achieving satisfactory evaluations on examinations, abstracts, and classroom presentations. The following topics will be discussed as they relate specifically to exercise: homeostasis and cardiovascular transport mechanisms, basic structure and function; characteristics of cardiac cells; the heart as a pump; the peripheral vascular system; vascular control; venous return and cardiac output; regulation of arterial pressure; cardiovascular responses to stress; and cardiovascular function in pathological situations. Prerequisite: Undergraduate course in exercise physiology or consent of instructor. LEC

HSES 880 Internship in Sport Management (1-10). This course will provide for supervised and directed experiences in selected sport management situations. The graduate adviser will schedule observations of the internship, as well as regular conferences with the student. Written summaries and evaluations of the internship will be prepared by the student, the agency supervisor, and the university graduate faculty member. Prerequisite: Admission to the Graduate Program in Sport Management. FLD

HSES 884 Legal Aspects of Sport (3). This course is intended to introduce graduates to the legal concepts of the American legal system and the implications of them to intercollegiate and professional sports. Particular emphasis will be given to risk management and preventive law. Other topics include: governance issues in intercollegiate and professional sports, contract law, employment discrimination, labor relations and collective bargaining, agency law and athlete agents; regulation of participation in intercollegiate and high school athletics, sport facility and event issues, participant liability issues, product liability issues, premises and spectator liability, participant violence in sports, and intellectual property law. Prerequisite: Admission to graduate program in School of Education LEC

HSES 890 Seminar in HSES (3). This course is designed to provide a general research seminar learning experience for graduate students in HSES. In particular, students will learn about faculty research activities and interests from a variety of specialty areas both within KU and outside of KU. Through faculty and guest presentations, students will be exposed to a variety of design and methodologies used to conduct research in the specialty areas of HSES. LEC

HSES 892 Psychological Foundations of Sport and Physical Activity (3). This course is designed to teach psychological components of sport performance to the practitioner. Issues related to stress, concentration, self efficacy, communications, mental rehearsal, team cohesion, etc. will be explored as each relates to performance outcome. The integration of exercise physiology and biometrics with sport psychology will be emphasized so the student understands the mental aspects of performance relative to the other. Prerequisite: A course in psychology of coaching or consent of instructor. LEC

HSES 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

HSES 898 Master's Project (1-4). RSH

HSES 899 Master's Thesis (1-6). The

HSES 905 Advanced Concepts in Health Education (3). This course is designed as an in-depth study of the pedagogy of health education. It is concerned with the effects of various health education models, new materials, and innovative teaching techniques. The effectiveness of various media such as films, slides, transparencies, microcomputers, and assessment tools will be analyzed. Research concerning innovations in education will be investigated along with a study of future trends in the field. Timely issues of controversy about health education practices and the effectiveness of values clarification activities will also be discussed. LEC

HSES 909 Administration Literature in Physical Education (3). Analysis of research studies completed in physical education administration. Findings reported in the literature concerning administrative research in physical education will be discussed. Prerequisites: Graduate-level courses in education administration and administration of physical education. LEC

HSES 910 Biochemistry of Exercise (3). This course will include an in-depth examination of metabolic and endocrine principles as they relate to physical exercise and training. Specific topics will include: substrate utilization in exercise, metabolic controls, muscle biochemistry, nutrition, hormonal influences in exercise. Both instructor and students will report on the most current literature relating to the topics. Prerequisite: Human bioenergetics or a course in biochemistry. LEC

HSES 926 Grant and Research Proposal Writing (3). This is a course for students to examine the sources of funding which provide financial support for research projects. The areas of study include types of research funding available on a local, state, and federal level, the elements and design of writing a proposal and strategies involved in securing financial support for research. A focus for the course will be upon preparing a research proposal for funding. Prerequisite: PRE 710. LEC

HSES 940 Scientific Dimensions of Exercise and Health (3). This course has been designed to bring together the many scientific factors relating exercise and physical activity to health and human function. The course focuses on the interdisciplinary nature of this relationship and reviews the physiological, sociological, psychological, and behavioral factors involved. Prerequisite: Fifteen hours of graduate level course work in health or physical education and admission to health or physical education doctoral program. LEC

HSES 980 Advanced Topics: (1-3). A special course of study to meet current needs of education professionals — primarily for post-master’s level students. LEC

HSES 981 Current Issues in Health and Physical Education (3). This course will explore the latest philosophical issues and controversies which are impacting the fields of health, physical education, and athletics. The student will explore the current and future ramifications of each issue and its potential effects on the profession. Prerequisite: Admission to the Health, Sport, and Exercise Sciences Doctoral Program. LEC

HSES 982 Research Ethics (3). This course is designed to cover a range of topics typically included in instruction about responsible conduct of research. This course explores a variety of ethical and policy issues that arise during the conduct of scientific research. Topics covered include: Research Misconduct, Data Management, Use of Animal Subjects, Use of Human Subjects, Conflicts of Interest and Commitment, Authorship, Publication and Peer Review, and Collaboration and Mentoring. Course sessions will include lectures, discussion periods, and analyses of case studies. Prerequisite: Doctoral student or permission of the instructor. LEC

HSES 995 Field Experience in: (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conferences with the student. Written summaries and evaluations of the field experiences will be prepared independently by the student, a representative of the cooperating agency, and the adviser. Open only to advanced students. Field experience credit in any one semester may not exceed five hours, and total credit may not exceed eight hours. FLD

HSES 996 College Teaching Experience in: (1-3). To meet the college teaching experience requirement for doctoral programs, a student shall engage in a semester-long, planned, instructional activity that shall include college classroom teaching under supervision. Planning shall be done with the adviser and/or member of the faculty who will supervise the experience. The activity shall be done under the supervision of a member of the University of Kansas faculty or by an individual or individuals designated by the candidate’s committee. FLD

HSES 997 Individual Study (1-4). Course graded on a satisfactory/fail basis. Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

HSES 998 Professional Seminar (3). This seminar based course will be designed to prepare the doctoral student for academic careers or careers in industry after they graduate. The topics covered will be promotion and tenure procedures and expectations, including but not limited to teaching, research and service expectations at research intensive institutions, regional comprehensive institutions and small liberal arts colleges. Industry career options will be discussed and guest speakers from various disciplines will be brought in to discuss options and expectations with this career path. Prerequisite: Doctoral student or permission of the instructor. LEC

HSES 999 Doctoral Dissertation (1-15). THE

Music Education and Music Therapy

See the School of Music chapter of this catalog.

Psychology and Research in Education

Chair: Karen D. Multon, kmultan@ku.edu
Joseph R. Pearson Hall, 1122 W. Campus Road, Room 621
Lawrence, KS 66045-3101, www.soec.ksu.edu/pre

Admissions Clerk: Loretta Warren, preadmit@ku.edu,
621 J.R. Pearson, (785) 864-9645

Professors: Harrington, Kerr, Krieshok, Lee, Lichtenberg, Multon, Poggio

Research Professor: Glasnap

Professors Emeriti: Borgens, Fine, Hohn, Johnson, McDermott, Price, Salkind, Tracy

Associate Professors: Frey, Kingston, Lowe

The Center for Psychosocial Services is staffed by student clinicians in school psychology and counseling psychology who earn credit while they gain practical experience working directly with clients.
Assistant Professors: Hansen, Patterson, Peyton, Reynolds, Skorupski

The Department of Psychology and Research in Education offers graduate training programs in counseling psychology, educational psychology and research, and school psychology.

Note: The department may change its graduate studies requirements and expectations. Prospective and current students should obtain the current degree requirements from the department.

Submit your application online at www.grad.ku.edu.

Send one copy of all original transcripts to

The University of Kansas
Department of Psychology and Research in Education
Joseph R. Pearson Hall, 1122 W. Campus Road, Room 621
Lawrence, KS 66045-3101

Prerequisites for Regular Admission

Prerequisites include:
- Undergraduate grade-point average of 3.0 or higher on a 4.0 scale
- Graduate grade-point average of 3.5 or higher on a 4.0 scale
- Graduate Record Examination general test scores
- Completed bachelor’s or master’s degree in counseling, psychology, or a related area. (An applicant who does not have an undergraduate degree in education or psychology should have a minimum of 14 undergraduate credit hours in the behavioral sciences.)

At the first enrollment, a doctoral student reviews any previous graduate work with an adviser to identify any course work in which the student is deficient. Students holding master’s degrees in other areas should recognize that such course work may require up to a year to complete and, in some instances, must be taken before the actual doctoral course requirements.

Counseling Psychology Programs

Degrees offered include the Master of Science in counseling psychology (mental health concentration) and Doctor of Philosophy in counseling psychology.

M.S. in Counseling Psychology

Training Director: Tamara Mikinski, mikinski@ku.edu,
621 J.R. Pearson, (785) 864-3931

For the M.S. degree, students earn a concentration in mental health counseling.

Admission. The admission deadline is January 15 to begin course work in the following summer or fall.

Required Admission Materials
1. Graduate application form, www.grad.ku.edu, and application fee. See Admission in the General Information chapter of this catalog.
3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code, 66871; Department code, 2005.
5. Letter of intent.
6. Résumé.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Program Requirements. The mental health concentration requires about 40 to 44 credit hours of course work. Individuals wishing to become licensed professional counselors in Kansas need to meet additional requirements, described online at www.ksbsrb.org. You may also wish to consult the American Counseling Association’s Web site, www.counseling.org, for additional information. Besides a core of work in counseling psychology (including counseling theory, career development, interviewing, assessment, group counseling, professional issues, and practicum), work is required in developmental psychology, research, and diagnosis and psychopathology. All students complete either a thesis, a research project, or a comprehensive examination. After entering the program, students should meet with an adviser to plan a schedule for completing degree requirements. Students in the Kansas City area may complete a portion of the work on the KU Edwards Campus, http://edwardscampus.ku.edu, in Overland Park.

Ph.D. in Counseling Psychology

Training Director: James Lichtenberg, jlicht@ku.edu,
621 J.R. Pearson, (785) 864-3931

Admission. The admission deadline is December 15 to begin course work in the following summer or fall.

Required Admission Materials
1. Graduate application form, www.grad.ku.edu, and application fee. See Admission in the General Information chapter of this catalog.
3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code, 66871; Department code, 2005.
5. Letter of intent.
6. Résumé.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Additional Admission Materials
8. If the applicant has completed a practicum in counseling or a related area, one recommendation should be completed by the practicum supervisor. A practicum form is included in the PRE departmental application.

Review of Graduate Status. At the beginning of each fall semester, the department formally evaluates the progress and status of all students in the program.

Course Work Requirements. In addition to any background competency deficiencies, each student must complete the following course work. This constitutes the minimal substantive requirement of the program.

Psychological Foundations (12-15 hours). Students must take at least one course in each of five general psychology core areas. These serve as the minor area requirement for the doctoral degree program. Course equivalencies that have been met during the student’s master’s program can be waived as required doctoral course work:
1. Biological Bases of Behavior. Select one:
   - PSYC 864 Clinical Neuropsychology
   - PSYC 961 Biological Foundations of Psychopathology
2. Cognitive/Affective Bases of Behavior. Select one:
   - PSYC 723 Advanced Cognitive Psychology
   - PSYC 757 Theories of Perception
   - PRE 807 Theories and Research in Human Learning
   - PSYC 831 Advanced Human Learning and Memory
3. Social Bases of Behavior. Select one:
   - PSYC 744 Advanced Social Psychology I
   - PSYC 775 Advanced Social Psychology II
   - PSYC 777 Social Psychology: Theory, Research, and Clinical Applications
4. Individual Bases of Behavior. Select one:
   - PSYC 960 Advanced Psychopathology
   - PRE 890 Diagnosis and Psychopathology
5. History and Systems of Psychology
   - PSYC 805 History of Psychology

Professional Core
1. Counseling Theory and Practice
   - PRE 740 Counseling and Interviewing Skills

KU's counseling psychology program is fully accredited by the American Psychological Association.
### Education Core

Course work is divided into five core areas that are essential for all students: Counseling Psychology, Development and Learning, Research and Evaluation, Measurement and Assessment, and Statistics. Each student must take course work in each of these core areas, either in the PRE department in all five core areas, or outside area and complete a thesis.

#### Required Courses
- PRE 742 Counseling Theory and Techniques
- PRE 842 Counseling Practicum
- PRE 844 Theory of Group Counseling
- PRE 846 Career Development
- PRE 857 Cross-Cultural Counseling
- PRE 880 Legal, Ethical, and Professional Issues in Counseling
- PRE 918 Seminar in Current Issues and Trends in Counseling Psychology
- PRE 945 Supervision in Counseling
- PRE 948 Advanced Practicum I
- PRE 949 Advanced Practicum II (two semesters)
- PRE 952 Advanced Counseling Theory and Research
- PRE 954 Vocational Psychology
- PRE 725 Educational Measurement
- PRE 830 Individual and Group Assessment
- PRE 951 Psychodiagnostic Assessment

#### Research Core

- **1. Required Courses**
  - PRE 710 Introduction to Statistical Analysis
  - PRE 711 Lab for Introduction to Statistical Analysis
  - PRE 715 Understanding Research in Education
  - PRE 810 Regression Analysis
  - PRE 811 Analysis of Variance
  - PRE 902 Research Methodology in Education or PSYC 968 Research Methods in Clinical Psychology or PSYC 815 Design and Analysis for Developmental Research
- **2. Research Practicum**
  - PRE 901 Research Practicum in (Counseling Psychology) (3 hours) Must be completed within two years of the first enrollment for students entering with the master’s degree or within three years of the first enrollment for students entering with the bachelor’s degree.
- **3. Research Elective**
  - PRE 814 Nonparametric Statistics
  - PRE 816 Evaluating School Programs
  - PRE 822 Educational Scales, Questionnaires, and Sampling
  - PRE 803 Computer Applications for Statistical Analyses
  - PRE 905 Multivariate Analysis
  - PRE 906 Structural Equation Modeling I
  - PRE 921 Theory and Applications of Educational Measurement
  - PSYC 991 Longitudinal Data Analysis
  - ELPS 871 Introduction to Qualitative Research

#### Elective Area

Students must take at least two additional courses in their chosen tracks. Examples of courses commonly chosen to meet these requirements are shown.

#### Comprehensive Examination

After completing course work, the student must pass a written comprehensive examination based on the curricular requirements of the counseling psychology program. A passing grade in all areas is required for progress toward the degree. The program defines the nature of this examination.

#### Internship

The primary criteria for internship placement are professional opportunities, adequate supervision by a qualified professional, and support by the agency offering the internship, and endorsement of the internship by the American Psychological Association. A student must complete the internship before the comprehensive examination can be completed and the internship setting has the endorsement of the program. The internship is completed in one year.

#### Dissertation

Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with his or her adviser, assembles a dissertation committee of three members. For information on post-comprehensive enrollment and general information about doctoral programs, consult the pertinent chapters of this catalog.

---

### Educational Psychology and Research Programs

#### Program Coordinators
- Bruce Frey (Research, Evaluation, Measurement and Statistics), bfrey@ku.edu, 643 J.R. Pearson, (785) 864-9706
- David Hansen (Development and Learning), dhanesen1@ku.edu, 642 J.R. Pearson, (785) 864-1874

Programs in this area lead to two degrees, the Master of Science in Education (M.S.Ed.) and the Doctor of Philosophy (Ph.D.). These programs offer instruction in learning, development, statistics, measurement, evaluation, and research methods.

#### Admission

The admission deadline is February 15 to begin course work in the following summer or fall. To begin course work in the following spring, the admission deadline is November 15.

#### Required Admission Materials
1. Graduate application form, [www.graduated.ku.edu](http://www.graduated.ku.edu), and application fee. See Admission in the General Information chapter of this catalog.
2. PRE departmental application form, [http://soe.ku.edu/pre-admissions-information](http://soe.ku.edu/pre-admissions-information).
3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code, R6871; Department code, 3403.
5. Letter of intent.
6. Résumé.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

### M.S.Ed. in Educational Psychology and Research

The M.S.Ed. program allows students to explore five core areas: learning and instruction, applied human development, testing and measurement, statistics, and research and evaluation methods. Students develop a concentration in one area. Students select one of two tracks, REMS or D and L.

#### Program Requirements

The program must include graduate course work in the PRE department in all five core areas. In addition, each student must take course work to establish a concentration in one area. The student must take course work in an outside area and complete a thesis.

#### Course Work Requirements

- **Educational Psychology and Research Core Areas**
  - Research and Evaluation
  - PRE 715 Understanding Research in Education
  - All students must take PRE 715.
  - Students must take at least one course in each of the following areas as well as at least two additional courses in their chosen tracks. Examples of courses commonly chosen to meet these requirements are shown.
  - Learning and Instruction. Example: PRE 704 Advanced Educational Psychology: Learning Processes in Education
  - Applied Human Development. Example: PRE 705 Human Development Through the Life Span
  - Measurement and Assessment. Example: PRE 725 Educational Measurement
  - Statistics. Example: PRE 710 Introduction to Statistical Analysis and PRE 711 (Required lab section for PRE 710)

#### Ph.D. in Educational Psychology and Research

Doctoral study passes through three stages. In the introductory stage, the emphasis is on the general content of educational psychology and research and the fundamental measurement, evaluation, and research skills needed by scholars. In the professional specialization stage, the emphasis is on advanced knowledge and skills in specific areas of study, application of evaluation and research skills, and production and identification of formal, researchable hypotheses. In the doctoral research stage, emphasis turns to the ability to conduct research independently on original problems, to disseminate research findings, and to participate in professional activities.
Course Work Requirements

Educational Psychology and Research Core Areas. All doctoral students must enroll in at least one course at or above the 800 level in each of the following core areas. This course work must be beyond and in addition to that required by the educational psychology and research M.S.Ed. degree. Examples of courses commonly chosen to meet these requirements are shown.

- Learning and Instruction. Example: PRE 807 Theories and Research in Human Learning
- Applied Human Development. Examples: PRE 800 Development During Youth and Adulthood
- PRE 806 Issues in Human Growth and Development
- Research and Evaluation. Examples: PRE 902 Research Methodology in Education
- PRE 816 Evaluating School Programs
- PRE 812 Meta-Analysis
- Measurement and Assessment. Examples: PRE 822 Educational Scales, Questionnaires, and Sampling
- PRE 921 Theory and Applications of Educational Measurement
- PRE 922 Item Response Theory
- Statistics. Examples: PRE 810 Regression Analysis
- PRE 831 Analysis of Variance
- PRE 905 Multivariate Analysis
- PRE 926 Hierarchical Linear Modeling

School of Education Core Requirements. Under School of Education policy, students must enroll in one course in general curriculum and one course in the historical, philosophical, or sociological foundations of education. These courses are offered by other departments in the school. For a current list of courses that qualify for this requirement, see the School of Education Web site at www.soe.ku.edu. The school also requires the following:

- Minor. All students must complete 12 hours in an area outside their programs. Students should consult the Minor advisor to choose a minor that supports their major areas.
- Supervised College Teaching. All students must complete PRE 996, a supervised college teaching experience.
- Major Requirements. In addition to the program and school core requirements, students must enroll in an additional eight specialization courses from the two tracks. A minimum of 24 credit hours is required, but students may earn more, depending on their interests and needs.

Research Skills. Doctoral preparation in educational psychology and research implies a strong emphasis on the development of research skills. Every doctoral student must demonstrate these skills by completing three projects. Examples include submission of a scholarly paper to an appropriate professional organization, development of a position paper on an issue related to educational psychology and research, or application of statistical procedures to a dataset.

Comprehensive Examination. Following completion of course work, a student must complete and pass a comprehensive examination and then a comprehensive oral examination. The program defines the nature of these examinations.

Dissertation. Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with the adviser, assembles a dissertation committee. For information on post-comprehensive enrollment and general information about doctoral programs, see the pertinent chapters of this catalog.

School Psychology Programs

Training Director: Patricia Lowe, plowe@ku.edu, 621 J.R. Pearson, (785) 864-3931

Programs lead to Specialist in Education (Ed.S.) and Doctor of Philosophy (Ph.D.) degrees. The curriculum prepares the student to function professionally as a school psychologist and to develop the skills of a psychoeducational consultant. The program emphasizes current issues and trends in school psychology. The doctoral program adheres to a scientist-practitioner orientation that extends the student’s professional skills and theoretical understanding of school psychology issues. This approach helps the student to acquire competence in research and in the teaching of psychology.

Admission. The admission deadline is December 15 to begin course work in the following summer or fall.

Required Admission Materials
1. Graduate application form, www.graduate.ku.edu, and application fee. See Admission in the General Information chapter of this catalog.

3. One copy of official transcripts of all previous college work, sent directly to the Graduate Application Processing Center. The original transcript is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code, R6871; Department code, 3406.
5. Letter of intent.
6. Resume.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Ed.S. in School Psychology

The Ed.S. program prepares graduates to function effectively as school psychologists and to meet the recommendations of professional organizations and Kansas licensure requirements. The Ed.S. program is accredited by the National Association of School Psychologists, the National Council for Accreditation of Teacher Education, and the Kansas State Department of Education.

Program Requirements. The Ed.S. program consists of two years of full-time graduate study (about 65 semester credit hours) followed by a third year of internship. Students completing the program are licensed for PK through grade 12. To be licensed for early childhood through grade 12, students must obtain 100 hours of applied experience with young children and their families in practica or internship.

All students obtain competence in school psychology primarily by completing a sequence of prescribed courses and field-based experiences. However, there may be room in a student’s program for electives, depending on previous experiences and course work. The standard course sequence for students in the Ed.S. program is as follows:

First Year, Fall Semester
- PRE 690 Introduction to School Psychology
- PRE 725 Educational Measurement
- PRE 770 Developmental Psychopathology: Diagnosis, Intervention, and Prevention
- PRE 798 Special Course: Applied Behavior Analysis and Evidence-Based Interventions in School Psychology
- PRE 805 Individual Intelligence Testing

First Year, Spring Semester
- PRE 839 Clinical Techniques in Academic Assessment and Intervention
- PRE 860 Assessment of Behavior Problems and Personality
- PRE 930 Ethics and Current Issues in School Psychology
- PRE 965 Foundations of Psychoeducational Consultation

First Year, Summer Session
- PRE 710 Introduction to Statistical Analysis
- PRE 711 Lab for Introduction to Statistical Analysis
- PRE 718 Advanced Research Methods
- PRE 795 Therapeutic Intervention: Home and School

Second Year, Fall Semester
- SPED 725 Introduction to Psychology and Education of Children and Youth with Disabilities
- PRE 855 Psychoeducational Clinic: Assessment, Consultation, and Intervention
- PRE 910 Practicum in School Psychology
- PRE 975 Advanced Practicum: School Psychology

Second Year, Spring Semester
- PRE 704 Advanced Educational Psychology
- PRE 796 Special Course: Consultation Systems and Program Evaluation
- PRE 859 Psychocognitive Clinic II: Assessment, Consultation, and Intervention
- PRE 911 Advanced Practicum in School Psychology

Second Year, Summer Session
- PRE 947 Specialist Research (May be taken in 1- to 4-credit-hour segments)

Third Year, Fall Semester
- PRE 991 Ed.S. Internship in School Psychology

Third Year, Spring Semester
- PRE 991 Ed.S. Internship in School Psychology

Note: Early childhood licensure (Birth to Three) requires PRE 960 Assessment of Infants, Toddlers, and Young Children and at least 100 clock hours of supervised experience with infants and toddlers and their parents during either the practicum sequence or internship.

Ph.D. in School Psychology

The doctoral program adheres to a scientist-practitioner orientation. Doctoral study extends the student’s applied, research, and teaching skills and allows specialization. A 12-credit-hour minor is required. Research skills are described under Doctor of Philosophy with a Major in Education. The doctoral program in school psychology is accredited by the American Psychological Association.
the National Association of School Psychologists, the National Council for the Accreditation of Teacher Education, and the Kansas State Department of Education. It is usually a four-year program of full-time study followed by a full year of internship.

**Research Skills.** The student must complete course work and demonstrate computer analysis of research data. In addition, each doctoral student must submit a manuscript and have it accepted for presentation at a convention of a scholarly association or submit a manuscript for publication in a professional journal.

**Comprehensive Examination.** After completing course work, a student must pass a written comprehensive examination. Content is based on the curricular requirements of the school psychology program. After satisfactory completion of the written examination, the student must pass a comprehensive oral examination. The program defines the nature of these examinations.

**Internship.** The internship usually is finished in one year after completion of most course work, although it may extend over two years. It is a year of supervision in which the student extends skills and continues professional development while working professionally in an approved setting. The internship gives students an opportunity to integrate theory and practice as they field-test skills and concepts. Content, structure, and supervision requirements follow guidelines of the American Psychological Association and the Council of Directors of School Psychology Programs. Information on internship sites is available in the department office.

**Dissertation.** Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with the adviser, assembles a dissertation committee. For information on post-comprehensive enrollment and general information about doctoral programs, see the pertinent chapters of this catalog.

**Course Work Requirements**

**Professional School Psychology Area**

1. **Psychodiagnostic Assessment, Consultation and Intervention, and Professional Practice** (all required unless indicated).
   - PRE 690 Introduction to School Psychology
   - PRE 770 Developmental Psychopathology, Diagnosis, Intervention, and Prevention
   - PRE 798 Special Course: Applied Behavior Analysis and Evidence-Based Interventions in School Psychology
   - PRE 798 Special Course: Consultation Systems and Program Evaluation
   - PRE 805 Individual Intelligence Testing
   - PRE 835 Clinical Techniques in Academic Assessment and Intervention
   - PRE 855 Psychoeducational Clinic I: Assessment, Consultation, and Intervention
   - PRE 860 Assessment of Behavior Problems and Personality
   - PRE 865 Psychoeducational Clinic II: Assessment, Consultation, and Intervention
   - PRE 910 Practicum in School Psychology
   - PRE 911 Advanced Practicum in School Psychology
   - PRE 930 Ethics and Current Issues in School Psychology
   - PRE 965 Foundations of Psychoeducational Consultation
   - PRE 975 Therapeutic Intervention: Home and School Internships
   - PRE 991 Ed.S. Internship (Optional)
   - PRE 992 Ph.D. Internship in School Psychology

   **Electives**
   - PRE 960 Assessment of Infants, Toddlers, and Young Children

   **Note:** Early childhood licensure (Birth to Three) requires PRE 960 Assessment of Infants, Toddlers, and Young Children and at least 100 clock hours of supervised experience with infants and toddlers and their parents during either the practicum sequence or internship.

2. **Learning and Development** (one learning course and one development course required).
   - PRE 704 Advanced Educational Psychology: Learning Processes in Education or PRE 807 Theories and Research in Human Learning and PRE 705 Human Development Through the Life Span

3. **Statistics, Psychoeducational Measurement, and Research Design** (all four courses required).
   - PRE 710 Introduction to Statistical Analysis
   - PRE 711 Lab for Introduction to Statistical Analysis
   (met through Professional School Psychology Area courses)
   - PRE 715 Understanding Research in Education
   - PRE 725 Educational Measurement

4. **Special Education**
   - SPED 725 Introduction to the Psychology and Education of Children and Youth with Disabilities

5. **Education Core** (required: one history, philosophy, or social foundations of education course and one curriculum or instruction course; one learning or development course, fulfilled by no. 2 above; and one research design or statistics course, fulfilled by Research Skills area below).
   - ELPS 770 History and Philosophy of Education or ELPS 771 Philosophy of Education I or ELPS 775 History of Education and Culture in America and C&T 709 Foundations of Curriculum and Instruction or C&T 800 Foundations of Curriculum Development or C&T 806 Instructional Strategies and Models

**Psychological Foundations.** All students must take course work in the five psychological core areas.

1. **Biological Bases of Behavior** (one course required).
   - PSYC 691 Biological Foundations of Psychopathology


3. **Social Bases of Behavior** (met through Professional School Psychology Area courses, plus one of the following).
   - PSYC 774 Advanced Social Psychology I or PSYC 775 Advanced Social Psychology II
   - PSYC 777 Social Psychology: Theory, Research, and Clinical Applications


5. **History and Systems of Psychology** (met through Professional School Psychology Area courses, plus one of the following).
   - ABSC 921 The History and Systems of Psychology or PRE 882 History and Systems of Psychology or PSYC 805 History of Psychology

**Research Skills.** Students must take PRE 810, PRE 811, and PRE 902 plus 6 hours in measurement, statistics, evaluation, or research design.

- PRE 810 Regression Analysis
- PRE 811 Analysis of Variance
- PRE 902 Research Methodology in Education
- PRE 803 Computer Applications for Statistical Analyses (elective)
- PRE 822 Educational Scales, Questionnaires, and Sampling (elective)
- PRE 905 Multivariate Analyses (elective)
- PRE 922 Item Response Theory (elective)

**Appreciation/Sensitivity to Ethnic and Cultural Diversity.** One of the following courses is required.

- PRE 875 Cross-Cultural Counseling or ELPS 743 Foundations in Multicultural Education (cross listed as C&T 807)

**Supervised College Teaching.** All students must take the following course:

- PRE 996 College Teaching Experience in: ________

**Minor Area.** A minor of at least 12 hours of approved study outside the school psychology program is required.

**Ph.D. Internship.** All students must complete a full-year internship.

**Additional Requirements.** All students must complete the following:

- **Comprehensive Examinations.** Written and oral comprehensive examinations. Dissertation

**Psychology and Research in Education Courses**

- PRE 575 Internship Exploration (1-5).
- PRE 580 Positive Psychology (3).
- PRE 598 Special Course: ________ (1-5).
- PRE 690 Introduction to School Psychology (3).
- PRE 703 Constructive Classroom Discipline (3). This course will examine concepts and techniques of constructive classroom management. Various theoretical
PRE 704 Advanced Educational Psychology: Learning Processes in Education (3). A study of the mental processes that influence learning and comprehension. The scope of the course will include individuals at all developmental levels and in a variety of settings. Key issues for the intellectual, affective, and behavioral domains of memory, concepts, motivation and social factors affecting learning processes. LEC

PRE 705 Human Development Through the Life Span (3). This course will cover the social, emotional, psychological, and cognitive changes that occur from conception through death. The course should have value to classroom teachers, school psychologists, counselors, and other school consultants. LEC

PRE 710 Introduction to Statistical Analysis (3). Emphasis on the conceptual underpinnings of statistical analysis of educational data. Includes univariate and bivariate descriptive statistics, sampling distributions, statistical estimation, hypothesis testing and procedures in testing statistical hypothesis for one and two sample designs. Prerequisite: Concurrent enrollment in PRE 711 or by permission of the instructor. LEC

PRE 711 Lab for Introduction to Statistical Analysis (1). Creation and manipulation of data sets. Analysis of data with statistical packages, with an emphasis on descriptive statistics, graphical procedures, and univariate parametric methods. Graded on a satisfactory/fail basis. Prerequisite: Concurrent enrollment in PRE 710 or PRE 711 or by permission of the instructor. LEC

PRE 715 Understanding Research in Education (3). This course introduces the concepts and skills involved in understanding and analyzing research in education and related areas. The course provides an overview of basic, general knowledge of various research methodology. Students should get a mini-study of each method in greater depth through additional course work before being fully prepared to conduct independent research. However this course should enhance their ability to locate, read, comprehend, and critically analyze research articles and reports. Topics in the course include: understanding how research publications and journals are organized and written, and how to critically read and understand the results, conclusions, and recommendations of published research. The course fulfills the requirement of a research methods course in the first 12 hours of graduate study. LEC

PRE 720 Educational Measurement in the Classroom (3). An introduction to concepts and principles in educational measurement. Communication of data and procedures for formative and summative classroom evaluation. Planning student evaluation, coordinating evaluation with objectives, item development, item analysis, relating evaluation to instruction, and reporting student progress to parents and the school. Norm referenced and criterion referenced tests are considered. LEC

PRE 725 Educational Measurement (3). The course is an introduction to the application of the concepts of reliability, validity, and practicality to the development, selection, use, and interpretation of tests and other measuring instruments in the field of education. The concepts of norm referenced and criterion referenced tests; the interpretation and use of norms; standard scores, percentiles, quotients, and grade equivalents are among the topics covered. An understanding of the role of measurement in educational research, diagnosis, and decision making is included. LEC

PRE 740 Counseling and Interviewing Skills (3). An experiential and performance based course having three major objectives: 1) the acquisition of basic counseling skills and strategies by means of microcounseling training; 2) learning to use these skills effectively in a counseling relationship; and 3) development of students’ understanding of their personal characteristics and how these characteristics relate to functioning as an effective helping professional. This course should normally be taken at the earliest possible time in the student’s program. Open to counseling majors. Non-majors may be admitted only by permission of the instructor, if space permits. Prerequisite: Written consent of laboratory coordinator. LEC

PRE 742 Counseling Theory and Techniques (3). An introductory examination of several major theories of counseling and therapy including psychodynamic views, person-centered, behavioral, and cognitive-behavioral approaches. Attention given to research reviews and factors various theories have in common. Designed for graduate students in counseling psychology or allied fields. Prerequisite: Graduate student status or permission of the instructor. LEC

PRE 770 Developmental Psychopathology: Diagnosis, Intervention, and Prevention (3). Foundations of child and adolescent psychopathology from a developmental and educational perspective. Classification, assessment, and etiology of clinical disorders. Examination of risk and protective factors associated with these various disorders. Emphasis of empirically based intervention strategies and prevention programs. Graduate student standing. LEC

PRE 797 Independent Readings and Research in: (1-3). Opportunity for students to participate in supervised reading and research on special topics of interest for which there is no regularly scheduled course. Students must have prior written consent of an instructor. May not be used to substitute for regularly scheduled course offerings. Intended for students with appropriate undergraduate or graduate preparation but without enough background course work to be in the area of interest. (Students with extensive graduate work should enroll in PRE 997; undergraduate students may enroll in PRE 497.) Graded on a satisfactory/unsatisfactory basis. RSH

PRE 798 Special Courses: (1-5). A special course of study to meet current needs of education professionals—primarily for graduate students. Course is graded on a satisfactory/unsatisfactory basis. LEC

PRE 800 Development During Youth and Adulthood (3). An examination from a life-span perspective of major issues affecting changes after adolescence. Topics include intelligence, identity, intimacy, the role of work, and moral concepts. Theoretical issues, research findings, and educational and social policy implications will be examined. Students will prepare papers on significant issues in the field of childhood and adolescence. Prerequisite: Concurrent enrollment in a course on naturalistic or experimental research methods. LEC

PRE 803 Computer Applications for Statistical Analyses (3). Computer applications for a variety of statistical techniques. Emphasis may be placed on applications with microcomputers or mainframes. Prerequisites: PRE 710 or equivalent. LEC

PRE 805 Individual Intelligence Testing (1-3). Supervised experience in the administration, scoring, and interpretation of the major individual intelligence tests for children, adolescents, and adults. Other areas to be covered in this course will include methods of interpreting test results; measurement of different characteristics of instruments used to assess cognitive abilities; ethical and legal issues in the use of intelligence tests; and the use of cognitive assessments for identification and diagnosis. Prerequisite: Permission of instructor. LEC

PRE 806 Issues in Human Growth and Development (3). An overview and analysis of current topics related to human growth and development. Focus will be on current issues of a theoretical and methodological nature that affect the field of developmental psychology and applications to social and educational settings. Pre- requisite: Prior completion of a course in developmental psychology. LEC

PRE 807 Theories and Research in Human Learning (3). An overview of important models, principles and research findings related to the learning process. Attention is given to theories of learning and information processing which attempt to explain perceptual behavior, verbal learning and memory and social learning processes. Emphasis is placed on student development of research proposals in the area of human learning and achievement. Prerequisite: Permission of instructor. LEC

PRE 810 Regression Analysis (3). Multiple correlation/regression techniques, including stepwise and nonstepwise regression analysis, analysis of variance, and analysis of covariance. Prerequisite: PRE 710 or equivalent course. LEC

PRE 811 Analysis of Variance (3). Analysis of variance techniques including one-way ANOVA, planned and post hoc comparisons, multilway ANOVA, repeated measures ANOVA, and mixed designs. Prerequisites: PRE 710 and PRE 711. LEC

PRE 812 Meta-Analysis (3). A method to synthesize results from multiple studies. Prerequisite: PRE 811. LEC

PRE 814 Nonparametric Statistics (3). Methods of analysis for nominal and ranked data, multivary contingency table analysis. Prerequisite: PRE 811. LEC

PRE 816 Evaluating School Programs (3). Methods and procedures for evaluating educational programs. Attention is given to the development and evaluation of goals and objectives, creation of designs to monitor processes and outcomes, utilization of test and measurement systems for assessing outcomes, establishing evaluation standards and criteria, and application of statistical analyses. Prerequisite: PRE 710 or equivalent. LEC

PRE 820 Educational Scales, Questionnaires, and Sampling Methods (3). Development, construction, validation and scaling of noncognitive instruments including questionnaires, surveys, checklists, rating scales and obnuberave measures. The sampling methodology is emphasized. Item construction and analysis and the development of subscales are stressed. Prerequisite: PRE 720 or PRE 725 and PRE 710. LEC

PRE 830 Individual and Group Assessment (3). A consideration of basic concepts pertaining to selection and interpretation of both standardized and non-standardized assessment procedures and devices with attention given to communicating as- sessment information in individual and group counseling, and the role of empirical research in assessment information within the counseling relationship. Prerequisite: PRE 725 or comparable undergraduate principles of measurement course. LEC

PRE 833 Clinical Techniques in Academic Assessment and Intervention (3). Students will learn techniques of formal and informal assessment of academic skills in order to assist with educational transition of students with disabilities. Emphasis of intervention approaches and strategies for use with students who have academic delays. This course has a field-based practicum component. Prerequisite: Graduate student standing in the School Psychology program and permission of instructor. LEC

PRE 840 Guidance and Counseling in the Public Schools (3). This course is designed to provide information about the organization and administration of guidance and counseling programs in the public schools. Non-majors wishing to know more about the role of the counselor can be admitted with approval of the instructor. LEC

PRE 842 Counseling Practicum (Elementary, Secondary, Counseling Psychology) (6). This course is taken as one of the last courses in the master’s degree counseling program. The primary purpose of the course is for the student to develop individual counseling skills while functioning in a counseling setting. In addition to individual skills, students are also encouraged to participate in group counseling and other counseling related activities within the particular counseling setting. Students enroll in practicum for the level most closely related to their professional goals, i.e., elementary, secondary, counseling psychology. Graded on a satisfactory/fail basis. Prerequisites: PRE 810 or PRE 812 and PRH 501 or comparable undergraduate course. Corequisites: PRE 840, PRE 844, and PRE 846. Pre-enrollment with practicum coordinator. Students currently on academic probation will not be allowed to enroll in practicum. LEC

PRE 844 Theory of Group Counseling (3). Focuses on issues in group counseling. Topics covered are: theoretical background of group development, group leadership, selection of members, ethical issues, and effectiveness of groups. Prerequisite: Students must be admitted to the Program in Counseling Psychology. Nonmajors must have prior written consent of instructor. LEC

PRE 850 Career Development (3). Students will learn procedures for assessing career development and planning for career development. In addition to individual diversity, students will participate in group counseling and other counseling related activities within the particular counseling setting. Students enroll in practicum for the level most closely related to their professional goals, i.e., elementary, secondary, counseling psychology. Graded on a satisfactory/fail basis. Prerequisites: PRE 810 or PRE 812 and PRH 501 or comparable undergraduate course. Corequisites: PRE 840, PRE 844, and PRE 846. Pre-enrollment with practicum coordinator. Students currently on academic probation will not be allowed to enroll in practicum. LEC

PRE 850 Human Relationship Skills in the Classroom (3). The purpose of this course is to provide educators with a awareness and skill training in basic human relation-
ship/communication skills. The course is focused on skills that provide educators with effective communication skills for working with students, educators, and parents. LEC

PRE 855 Psychoducational Clinic I: Assessment, Consultation, and Intervention (3). This is a practical course where students apply previous learning and gain experience in assessment and intervention with children, families, and school consultation. Team collaboration is encouraged. An individual study of the problems and procedures which relate to the validity of research methods. Emphasis will be placed on reading the current literature on research methodology. Students are required to develop a research proposal. Prerequisite: PRE 811 and PRE 720 or PRE 725. LEC

PRE 905 Multivariate Analysis (3). Multivariate analysis of variance, discriminant analysis, logistic regression, and exploratory factor analysis. Prerequisite: PRE 904 and experience with a statistical software package. LEC

PRE 906 Structural Equation Modeling (3). Multivariate analysis of variance, discriminant analysis, logistic regression, and exploratory factor analysis. Prerequisite: PRE 904 and experience with a statistical software package. LEC

PRE 907 The Psychology of Instruction and Human Learning (4). A study of research and theory in the areas of cognitive learning and of instruction, including such topics as motivation, problem solving, discovery learning, conceptualization, theory construction and task analysis. Emphasis placed on independent learning experiences and field-based experimentation with pilot study. Prerequisite: PRE 811. LEC

PRE 911 Advanced Practicum in School Psychology (3). A continuation of PRE 910 with special emphasis on remedial techniques associated with learning difficulties. (Same as SPED 802.) Prerequisite: Permission of advisor and instructor. LEC

PRE 912 Theory and Applications of Educational Measurement (3). Application of theory including classical theories of reliability and validity, latent-trait theories, item sampling, and factor analysis to problems in educational test development and use in areas such as evaluation, research, placement, and selection. Prerequisite: PRE 710 and PRE 816 or equivalent. LEC

PRE 922 Item Response Theory (3). Theoretical foundations and practical applications of item response theory in educational measurement. Prerequisite: PRE 921. LEC

PRE 923 Advanced Theory and Applications of Item Response Theory (3). This course is designed to acquaint students with knowledge of advanced theory and applications in the field of item response theory (IRT). Topics to be covered include: advanced IRT models for dichotomous and polytomous, multidimensional, rater effects, and testlet-based item response data, estimation of parameters for these models and related software, and goodness of fit tests. The course will also cover some advanced applications using these models, including test development, test score equating, differential item functioning, scoring and score reporting, Monte Carlo simulation studies, and innovative test designs. Prerequisite: PRE 922 or equivalent course. LEC
PRE 930 Ethics and Current Issues in School Psychology (3). This course is intended to introduce the student to a) ethical principles, standards, and issues in the profession of psychology; b) legal issues involved in the practice of school psychology; c) problem-solving models to solve ethical dilemmas; and d) current topics in the field of school psychology. Prerequisite: Permission of the instructor. LEC

PRE 931 Computer-Based Testing (3). Computer-based testing holds the promise of increasing test validity and reliability while reducing the logistical problems associated with large-scale assessment. This seminar will provide an overview of what we have learned about administering tests on computer between the 1960s and 1990s. It will focus on pertinent measurement issues, but depending on class interest topics will vary. A primary focus in course is desireable but not required. Prerequisite: PRE 725 or equivalent course. LEC

PRE 932 Diagnostic Testing (3). There is a great demand for more useful, more actionable ways to interpret and report large-scale group administered tests. Contemporary perspectives in psychology are falling into the models of test characteristics and methods. Methods for post-master’s level students. Prerequisite: Prior graduate level coursework in development, learning, measurement, and statistics. LEC

PRE 945 Supervision in Counseling (3). Designed to be the initial advanced practicum for doctoral students. Attention is directed to development of a broad range of basic and advanced skills. Graded on a satisfactory/fail basis. Prerequisite: PRE 842 or equivalent. LEC

PRE 947 Specialist Research (1-4). RSH

PRE 948 Advanced Practicum I (6). Designed to be the initial advanced practicum for first year doctoral students. Attention is directed to development of a broad range of basic and advanced skills. Graded on a satisfactory/fail basis. Prerequisite: PRE 842 or equivalent. LEC

PRE 949 Advanced Practicum II (6). Intensive counseling practice, including group and individual supervision, may be taken either through Counseling and Psychological Services or an approved site outside of the university. Focus is on the acquisition and evaluation of counseling and supervisory skills. Two consecutive semesters (Fall, Spring) of enrollment are required of doctoral students. Responsibility to the site is for a continuous nine months, with fall semester responsibilities ending on the first day of spring. A grade of incomplete will be granted at the end of the regular fall grading period, with the regular full grade being granted after completion of fall semester responsibilities. Graded on a satisfactory/fail basis. Prerequisite: Satisfactory completion of PRE 948 and prior or concurrent enrollment in PRE 951. LEC

PRE 950 Cognitive Theory and Strategies in Counseling Psychology (3). An examination of historical and contemporary cognitive theories and strategies used in the practice of counseling psychology. Consideration of theoretical positions and issues, research functions, assessment strategies, and application of techniques. Prerequisite: PRE 725 or equivalent. Satisfactory or fail. LEC

PRE 951 Psychodiagnostic Assessment (3). Survey of selected psychodiagnostic instruments currently in use and their administration, scoring, and interpretation. Emphasis will also be placed on the use of the clinical interview as an assessment tool, case formulation, and assessment, diagnosis, and intake report writing. Prerequisite: Completion of PRE 830 and degree-seeking status in Counseling Psychology or consent of instructor. LEC

PRE 952 Advanced Counseling Theory and Research (3). An advanced treatment of theories of counseling. Attention will be given at the end of the regular fall grading period, with the regular fall grade being granted after completion of fall semester responsibilities. Graded on a satisfactory/fail basis. Prerequisite: Satisfactory completion of PRE 948 and prior or concurrent enrollment in PRE 951. LEC

PRE 953 Interactional Perspectives on Counseling and Personality (3). A study of personality and therapeutic change from systems, interactional, and communications perspectives, with implications for research and assessment in counseling. Designed for graduate students at the specialist and doctoral levels. Prerequisite: Counseling Psychology doctoral student status or consent of instructor. LEC

PRE 954 Vocational Psychology (3). A survey of the major career development theories in counseling psychology. Models and methods of career counseling will be reviewed and integrated from the different theoretical perspectives. The empirical support of each theory and needed research will be identified. The course will include presentation of theories of career development and their specific applicability in counseling. The career development of special groups (women, the culturally different, non-white) will be studied as well as alternative models of delivery of counseling, and counseling and teaching. Prerequisite: Completion of PRE 846 or equivalent, and Ph.D. degree-seeking status in Counseling Psychology or consent of instructor. LEC

PRE 956 Theory of Marriage and Family Counseling (3). A survey of contemporary systems theories of marital and family function/dysfunction, theoretical models of family interaction, models of counseling practice and methods, and research on marital and family counseling. Prerequisite: Degree-seeking status in Counseling Psychology or consent of instructor. LEC

PRE 960 Assessment of Infants, Toddlers, and Young Children (3). The purpose of this course is to introduce the student to the assessment of various domains related to the development of infants, toddlers, and young children. The student will learn how to use formal and informal assessment techniques for screening, diagnostic, educational planning, and educational evaluation purposes. An emphasis will be placed on the linkage between testing and intervention. This course is designed for students in the applied psychology fields (i.e., school psychology, counseling psychology, clinical child psychology, and clinical psychology). Prerequisite: PRE 925, PRE 805 and permission from the instructor. LEC

PRE 968 Foundations of Psychoeducational Consultation (3). This is the first of a two semester sequence of courses on school-based consultation. The course is a combination lecture-laboratory experience that introduces the student to the literature, theory, and techniques of consultation. Prerequisite: Approval of instructor. LEC

PRE 969 Consultation II: Practice (3). This is the second in a series of two consultation courses. The course continues a review of literature and theory and also includes applied consultation experiences for the student. Class time is used to supervise the student’s field-based consultative activities. Prerequisite: Approval of instructor. LEC

PRE 970 Counseling with Adults (3). This course will focus on the utilization and integration of life theory perspectives with counseling theory and practice. Particular attention is given to the adaptation of counseling practices to the developmental concerns of adult male and female clients. Additional emphasis is given to encouraging reparation in the context of the adult career counseling. Prerequisite: Graduate student status as an advanced master’s student or doctoral student in the Program in Counseling Psychology or written permission of instructor. LEC

PRE 975 Therapeutic Intervention: Home and School (3). The course includes a review of literature and theory as well as supervised practice. Therapeutic intervention is broadly conceived, including individual and group counseling, and parent and teacher consultation. The importance of the family-school relationship is stressed. Prerequisite: Permission of instructor and completion of course on counseling. LEC

PRE 976 Advanced Topics: _____ (3). A course designed to be the second of two sequential courses in school psychology. Prerequisite: Completion of two consecutive enrollments, covering a minimum of eleven months of experience in an approved counseling psychology field setting. Supervision and directed experiences coordinated by the instructor. The program is designed for postgraduate students. Prerequisites: Required of all counseling psychology doctoral students. Prerequisite: Doctoral degree-seeking status in counseling psychology, completion of Ph.D. program, and successful evaluation of candidacy. Prerequisite: Student must have completed the foundational courses. LEC

PRE 980 Advanced Topics: _____ (3). This is the second in a series of two consultation courses. The course continues a review of literature and theory and also includes applied consultation experiences for the student. Class time is used to supervise the student’s field-based consultative activities. The student will learn how to use formal and informal assessment techniques for screening, diagnostic, educational planning, and educational evaluation purposes. An emphasis will be placed on the linkage between testing and intervention. This course is designed for students in the applied psychology fields (i.e., school psychology, counseling psychology, clinical child psychology, and clinical psychology). Prerequisite: PRE 925, PRE 805 and permission from the instructor. LEC

PRE 990 Internship in Counseling Psychology (1). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved counseling psychology field setting. Supervision and directed experiences coordinated by the instructor. Prerequisite: the program is designed for postgraduate students. Prerequisites: Required of all counseling psychology doctoral students. Prerequisite: Doctoral degree-seeking status in counseling psychology, completion of Ph.D. program, and successful evaluation of candidacy. Prerequisite: Approval of School Psychology committee. FDL

PRE 995 Field Experience in: _____ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conferences with the student. Written summaries and evaluations of the field experiences will be prepared independently by the student, a representative of the cooperating agency, and the adviser. Open only to advanced students. Field experience credit in any one semester may not exceed five hours, and total credit may not exceed eight hours. FDL

PRE 996 College Teaching Experience in: _____ (2). To meet the college teaching requirement for doctoral programs, a student shall engage in a semester-long, planned, instructional activity that shall include college classroom teaching, developmental teaching, planning, and/or supervision/mentorship of a faculty who will supervise the experience. The activity shall be done under the supervision of a member of the University of Kansas faculty or by an individual or individuals designated by the candidate’s committee. FDL

PRE 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. Course is graded on a satisfactory/fail basis. RSH

PRE 998 Seminar in: _____ (1-4). Course is graded on a satisfactory/fail basis. LEC

PRE 999 Doctoral Dissertation (1-15). THE

Special Education

Chair: Chris Walther-Thomas, chriswtu@ku.edu
Joseph R. Pearson Hall 5122 W. Campus Road, Room 530
Lawrence, KS 66045-3101
http://specialeducation.ku.edu, (785) 864-4954
Admissions Officer: Sherrie Saathoff, specialedudn@ku.edu,
532 Joseph R. Pearson Hall, (785) 864-0556

Professors: Carta, Deshler, Greenwood, Horn, Meyen, Peterson,
Sailor, Simpson, Skrtic, A.Turnbull, H.R. Turnbull, Walther-
Thomas, Wehmeyer

Associate Professors: Chaffin, Clark, Gallagher, Guess, Moran, Whelan

THE UNIVERSITY OF KANSAS I 2009-2011

114 Psychology & Research in Education | Special Education
The Department of Special Education offers graduate education for students interested in teaching, research, and professional service related to children, adolescents, and adults with disabilities and their families. Since the 1970s, the department’s master’s and doctoral programs have received national and international recognition. The faculty is known for its field leadership and commitment to high-quality education for children and youth with disabilities, innovative field-based research, and preparation of highly effective program graduates. The annual U.S. News and World Report graduate program survey consistently ranks KU at the top when compared to more than 200 graduate programs in this field. As one of the most comprehensive special education preparation programs in the country, the department attracts students from many states and countries.

Graduate degrees associated with the department’s programs include the Master of Science in Education (M.S.Ed.), Doctor of Education (Ed.D.), and Doctor of Philosophy (Ph.D.). Students may pursue a master’s degree emphasizing teaching in one of six areas: Adaptive (i.e., high-incidence disabilities), Autism Spectrum Disorders, Deaf Education, Early Childhood Unified (birth through 5), Functional (i.e., low-incidence disabilities), and Transition Services. Students seeking Kansas State Department of Education teaching licensure can complete requirements for special education endorsement in one of four areas: Adaptive, Functional, Deaf Education, and Early Childhood Unified (birth through 5). With the exception of ECU, all endorsement areas require current Kansas licensure in elementary or secondary education. The doctoral program prepares experienced professionals for leadership roles as university faculty, researchers, and policymakers/administrators. Course work and field experience facilitate the development of advanced knowledge and skills in leadership, teacher education, research and scholarly writing, and disability advocacy. Areas of specialization are policy analysis and research, teacher education (e.g., high-incidence disabilities, early childhood unified education, secondary special education transition, and low-incidence disabilities), families and disability, and educational technology.

Graduate classes are taught on the main campus in Lawrence and on the KU Edwards Campus in Overland Park in suburban Kansas City about 40 miles from Lawrence. Master’s and doctoral students can expect to complete some graduate work on each campus.

**Admission**

Admission procedures, program descriptions, and degree requirements are available online at [http://specialeducation.soe.ku.edu](http://specialeducation.soe.ku.edu) or may be obtained from the Department of Special Education admissions officer, Sherrie Saathoff, specialeduadm@ku.edu.

Submit your application online at [www.graduate.ku.edu](http://www.graduate.ku.edu).

Send original transcripts of all completed college and university course work as well as all other required admission materials to:

**The University of Kansas**
Department of Special Education
Sherrie Saathoff, Admissions Officer
Joseph R. Pearson Hall, 1122 W. Campus Road, Room 521
Lawrence, KS 66045-3101

**Master of Science in Education Degree Program**

Graduates are employed as general educators, special educators, or consultants. Some hold teaching positions in clinics, hospitals, residential treatment centers, community-based centers, and early childhood programs. Many complete course work required for Kansas special education teaching endorsement. Some students work in related fields (e.g., general educators, speech therapists, social workers) and pursue this degree to expand their professional knowledge and skills by adding competence teaching children and youth with disabilities. These students may choose not to complete endorsement requirements. The M.S.Ed. program (including endorsement course work) ranges from 35 to 42 credit hours depending on the emphasis. In Kansas, students pursuing special education licensure can be recommended for provisional teaching endorsement after completing 9 credit hours (i.e., disability characteristics, methods and assessment, and fieldwork practicum). The degree involves 7 to 10 additional hours including content elective(s), research, and completion of a project, thesis, or written examination.

**Doctoral Degree Programs**

The doctoral degree program encourages and supports students working with faculty in cutting-edge research and development related to effective education in the field of disabilities. The Ph.D. and Ed.D. programs are similar, but serve different needs for special educators seeking advanced knowledge and leadership skills. Both degrees require intensive and rigorous study in special education foundations, disability issues, curriculum, teaching, program development, and research. The Graduate Record Examination is required for admission.

**Doctor of Education.** This degree is designed for master special educators who seek leadership positions in public school and other agencies related to program leadership, administration, development, and evaluation. Students complete a sequence of courses emphasizing applied research knowledge and skills. Specific core and research courses for the Ed.D. are described online at [http://specialeducation.soe.ku.edu](http://specialeducation.soe.ku.edu). In addition to the special education and research skills cores, students complete a structured, supervised field internship and designated hours in one of the doctoral program’s areas of specialization.

**Doctor of Philosophy.** This is a research degree. Graduates are prepared for roles as university faculty members, researchers, or policy makers. Specific core and research skills for the Ph.D. are described online at [http://specialeducation.soe.ku.edu](http://specialeducation.soe.ku.edu). In addition to the special education and research cores, students complete course work in one of the areas of specialization, a 12-hour minor in a related field, and a dissertation based on original research.

**Special Education Courses**

- SPED 500 Introduction to Sign Language (3).
- SPED 501 American Sign Language I (ASL I) (3).
- SPED 502 American Sign Language II (ASL II) (3).
- SPED 503 American Sign Language III (ASL III) (3).
- SPED 504 American Sign Language IV (ASL IV) (3).
- SPED 598 Special Course: ____ (1-5).
- SPED 631 Characteristics of Students Needing an Adaptive Curriculum (3).
- SPED 632 Characteristics of Students Needing a Functional Curriculum (3).

The 2009 edition of U.S. News & World Report’s “America’s Best Graduate Schools” ranked KU’s Department of Special Education first in the nation among public universities.

Other number one rankings were reported in the 1997 New York Times survey, in Education Week (1990), the Fiske Guide to Colleges, and in several studies published in special education journals in the 1970s, 1980s, and 1990s.
SPED 633 Characteristics of Learners with Hearing Loss — Deaf Studies (3).

SPED 635 Characteristics of Children and Youth with Disabilities: (3). SPED 641 Methods: Academic Instruction for Children and Youth with Disabilities in General Education and Learning Center Settings (3).

SPED 644 Assessment and Instructional Methods I: Learners with Hearing Loss (3). SPED 650 Curriculum and Methods of Instruction in Early Education (3).

SPED 660 Education of Children and Youth with Disabilities: (3). SPED 661 Supporting Children with Significant Learning and Behavioral Challenges (3).

SPED 663 Assessment Strategies in Early Education (3).

SPED 664 Inclusive Strategies and Intervention for Infants and Toddlers (3). SPED 665 Inclusive Strategies and Intervention for Preschoolers (3).

SPED 667 Field Experience in Preschool: Infant/Toddler (1).

SPED 668 Field Experience Infant/Toddler (1).

SPED 672 Field Experiences with Exceptional Children and Youth: (3).

SPED 700 Introduction to Sign Language (3). This is an introductory course in Sign Language and includes ASL and English sign vocabulary, a description of all manual sign systems, medical aspects of hearing loss, communication and language, and Deaf culture and community. SPED 701 American Sign Language I (ASL I) (3). This course will cover the development of American Sign Language and its application within the Deaf Community. It is based on the functional-notational approach to learning sign language. This approach organizes language around communicative purposes of everyday interaction.

SPED 702 American Sign Language II (ASL II) (3). This is the second level course American Sign Language and its application within the Deaf Community. It is based on the functional-notational approach to learning sign language. This approach organizes language around communicative purposes of everyday interaction. Prerequisite: SPED 701. LEC

SPED 703 American Sign Language III (ASL III) (3). This is the third level course in American Sign Language. The primary objective of the American Sign Language III is “Significantly productive use of手势 in context and the ability to sign to an understanding-five basic language skills: visual listening and signing. Prerequisite: SPED 702. LEC

SPED 704 American Sign Language IV (ASLV IV) (3). This is the fourth level course in American Sign Language. The primary objective of the American Sign Language IV “Signing Naturally” Level 3 curriculum is for students to continue using the two basic language skills: visual listening and signing. Prerequisite: SPED 703. LEC

SPED 706 Advanced Practices for Children with Disabilities in the Elementary General Education Classroom (3). This course is designed to enable novice teachers to master and apply the instructional and communicative skills that will facilitate appropriate and productive inclusion of children and youth with exceptionalities within general education classrooms and other school settings. Specific research-based strategies in curriculum content acquisition (content enhancements, learning strategies, classwide-peer tutoring), and specific research-based strategies in behavior management and teacher/student support teams will be learned and applied to real teaching experiences. Novice teachers will learn about collaborative structures found in schools to support student learning in general education settings (co-teaching, collaborative consultation, teacher/student support teams) and roles and responsibilities of teachers within these structures. Prerequisite: Admission to the Teacher Education Program. LEC

SPED 707 Advanced Practices for Adolescents with Disabilities in the Middle/Secondary General Classroom (3). This course is designed to enable novice teachers to master and apply the instructional and communicative skills that will facilitate appropriate and productive inclusion of middle and secondary school students with disabilities within general education classrooms and other school settings. Specific research-based strategies in curriculum content acquisition (content enhancements, learning strategies, classwide-peer tutoring), and specific research-based strategies in behavior management will be learned and applied to real teaching experiences. Novice teachers will learn about collaborative structures found in schools to support student learning in general education settings (co-teaching, collaborative consultation, teacher/student support teams) and roles and responsibilities of teachers within these structures. Prerequisite: Admission to the Teacher Education Program. LEC

SPED 708 Introduction to Hearing Impaired (2). A study of hearing defects and methods of aural training. The course also covers remedial work which teachers can use in treating such defects and meeting problems of hearing defective children. Prerequisite: Nine hours of education including educational psychology. LEC

SPED 710 Methods of Teaching Language to the Deaf (3). The effects of hearing loss on language acquisition and development. Systems for teaching language to individuals with hearing loss are introduced. Prerequisite: Course in normal language development and nine hours of education including educational psychology. LEC

SPED 715 Understanding Research in Education (3). This course introduces concepts and skills involved in understanding and analyzing research in special education. The course provides an overview of basic, general knowledge of various research methodologies. In addition, this course will teach students to locate, comprehend, and critically analyze research articles and reports. Students will become familiar with the principles and problems of becoming a competent consumer of research in Education.

SPED 717 Exceptional Children in Regular Classrooms (3). This course is designed to explore the relationship between regular and special education. Educational service delivery systems for exceptional children are identified and analyzed. Emphasis is placed upon procedures and special services that regular class teachers can provide for instructional and non-instructional services to exceptional children as assigned to regular classrooms. Procedures for enabling normal children to understand and appreciate the interaction with children who exhibit physical and behavioral variance from established norms are conveyed. Especially for regular class teachers and students desiring a career in teaching exceptional children. Will be offered by designated area sections or at specified times, LEC

SPED 718 Instructional Planning for Children and Youth with Disabilities: (1-3). This course provides knowledge and skills to adapt, and sequence instructional methods and materials to facilitate general education curriculum mastery. LEC

SPED 719 Learning and Technology (1). The central framework of “human learning in providing context for understanding instructional techniques and innovations. The lessons in this course explore how various “features of learning” and “features of technology” intersect. They discuss realistic options for improving the learning of students, and the learning of teachers, as they use technology in education. (Life-span range of levels). LEC

SPED 724 Data-Driven Instructional Decision Making (1). The lessons in this course present research-based methods for monitoring student behavior and academic progress. They explain how teachers may use this information to evaluate current and past instructional and behavioral strategies, and improve learning for all students. A focus will be on the use of educational data to support decision making. It is also explored how computer and information management technology tools support and facilitate the collection, storage, and analysis of observational data. LEC

SPED 725 Introduction to the Psychology and Education of Children and Youth with Disabilities (3). This course presents a survey of research on the identification, placement, and education of students with disabilities. This course emphasizes on patterns of social, cognitive, language, and physical development. Social, political, and economic advocacy issues are also addressed. Prerequisite: One course in Child Development. LEC

SPED 726 Exceptionality and Technology (1). Technology has the potential to dramatically improve the education and quality of life for people with disabilities. This course provides a foundation for understanding the potential of technology to enhance education, a functional model for selecting the best technology applications for students with special needs, and strategies for applying your knowledge to practical situations. LEC

SPED 727 Designing Instruction for Diverse Learners (3). This course explores to design, development, and implementation of technology-based solutions for students with disabilities in the preK-12 instructional environment. In this course, students will (1) gain an understanding of the Principles of Universal Design for Learning, (2) examine how technology has and can be developed in a manner to meet multiple needs, especially those with disabilities, and (3) analyze how professionals can identify and assess what technology-based solution would meet the needs of a particular individual or group of individuals. LEC

SPED 729 Introduction to Computing in Special Education (3). This course is designed to provide an introduction to basic concepts of computer literacy, with particular emphasis on the uses of microcomputers in educational settings for individuals with special needs. Topics include an overview of computing specific to the needs of individuals with special needs including: a)applications and the impact of computers in education and society, b) how to use computers to understand and associate concepts; c) introductory programming concepts; d) a survey of instructional and instructional-support applications of computers including examples of related software; e) software evaluation techniques; and f) on overview of resources in educational computing. Students will acquire hands-on operating experience with microcomputers through scheduled laboratory periods. LEC

SPED 730 Characteristics of Students in the Adaptive and Functional Curriculum (3). This course is designed as an introduction to the definition, characteristics, curriculum development, and special education issues pertinent to the educational development of students with an adaptive and functional curriculum. The needs for specialized services to meet specific learning and/or behavioral needs will be presented. Students will learn about the history of the education of exceptional learners, the assessment of specific disabilities associated with these needs and how they helped expand our understanding of who these individuals are and how to address specific needs, will also be addressed. Characteristics will be addressed in relation to why and how to use them in the identification and support of students with specific disabilities, specifically in areas of instructional and assistive learning. LEC

SPED 731 Supporting Children with Significant Learning and Behavioral Concerns (3). Students in this course will gain knowledge of the causes, and intervention and support approaches for young children through 5 years with significant support needs. These include young learners with multiple and significant disabilities including neurological impairments, physical disabilities, sensory impairments including dual sensory impairments, complex health care needs, significant developmental disabilities and challenging behavior. Emphasis is placed on environmental adaptations and direct instructional techniques to maximize independence as determined through systematic ecological inventories tailored to the individual child’s strengths and needs. Functional behavioral assessment and assistive technology designed to provide appropriate supports. Functional behavioral assessment procedures, proactive intervention strategies, and developing collaborative support plans will be studied. Prerequisite: Admission to the ECU - Birth to 3 program. Two or three graduate credits from the Department of Special Education or permission of the instructor. SPED 752 or its equivalent, SPED 734 or its equivalent, and SPED 725 or its equivalent. LEC

SPED 733 Characteristics of Learners with Hearing Loss — Deaf Studies (3). Deaf Studies includes basic characteristics of and issues in assessment and intervention for individuals with hearing loss. Emphasis is placed on environmental adaptations and direct instructional techniques to maximize independence as determined through systematic ecological inventories tailored to the individual child’s strengths and needs. Functional behavioral assessment and assistive technology designed to provide appropriate supports. Functional behavioral assessment procedures, proactive intervention strategies, and developing collaborative support plans will be studied. Prerequisite: Admission to the ECU - Birth to 3 program. Two or three graduate credits from the Department of Special Education or permission of the instructor. SPED 752 or its equivalent, SPED 734 or its equivalent, and SPED 725 or its equivalent. LEC

SPED 734 Inclusive Strategies and Intervention for Infants and Toddlers (3). Emphasizes curriculum development and early intervention provision for infants and toddlers through the planning of appropriate learning experiences, the design of learning environments, developing Individual Family Service Plans (IFSP), promoting collaboration among families and the use of various methods of enhancing the child’s.
Innovative special education training programs are being created to prepare skilled personnel for the changing roles, organizations, and educational processes that will characterize education in the future. Prospective students should consult faculty advisers in their areas of interest about changes in special education licensing programs.
Lessons contained within this course include an overview of positive behavioral support strategies, an introduction to specific positive behavioral support strategies, and a lesson on preventing problem behavior. LEC

**SPED 762 Functional Assessment Methods for Positive Behavioral Support (PBS) (1).** This course introduces current functional assessment methods that are used to build effective behavioral support. A strong emphasis will be placed on specific positive behavioral Support. After completing this course, you will have a better understanding of how to implement functional assessment methods in your classroom. LEC

**SPED 763 Development and Implementation of PBS Plans (1).** A positive behavioral support plan describes how features of the environment associated with problem behavior will be modified, what and how skills and strategies will be taught, and how individuals supporting a student will respond to both positive and problematic behavior. This course contains lessons on designing PBS plans, implementing PBS plans, modifying and assessing PBS plans. LEC

**SPED 764 Intervention Strategies for PBS I (1).** The purpose of this course is to introduce interventions that can be used as part of a comprehensive positive behavioral support plan. An effective positive behavioral support plan contains multiple intervention strategies that address the function maintaining a student’s problem behavior. This course contains lessons addressing setting events, antecedent interventions, replacing problem behavior, and consequence interventions. LEC

**SPED 765 Intervention Strategies for PBS II (1).** The purpose of this course is to introduce three types of interventions that can be used in positive behavioral support. An effective positive behavioral support plan contains multiple intervention strategies that address the function maintaining a student’s problem behavior. This course contains lessons on assessing setting events, antecedent interventions, replacing problem behavior, and consequence interventions. LEC

**SPED 766 Rethinking Environmental Systems (1).** The purpose of this course is to describe how positive behavioral support can be used to redesign the environment at a systems level. Considering the larger issues within a system including the basics of risk management and risk management, this course will focus on the role of staff and procedures that promote ongoing learning and collaborative problem solving processes within a school will improve implementation of long-term positive behavioral support efforts. This course contains lessons on classroom management, staff development, and school-wide discipline. LEC

**SPED 767 Creating Positive Lifestyles through PBS (1).** One of the most important outcomes of a positive behavioral support plan is an increase in the quality of life for both the student and everyone within the student’s social network. The purpose of this course is to introduce tools and strategies that support students with complex special needs. LEC

**SPED 768 Application of Assessment Information for Exceptional Children and Youth (3).** An analysis of information derived from assessment instruments and procedures appropriate to measuring the social and cognitive development of exceptional children and youth. Provides experiences in determining and presenting assessment data for use in instructional planning conferences. Prerequisite: An undergraduate or graduate course in educational measurement, and SPED 425 or SPED 725. LEC

**SPED 793 Psychology of Deafness (2).** Reviews of the literature pertaining to psychological evaluations of the deaf and hard of hearing. Divergent views of deafness, type and degree of deafness are considered. Prerequisite: SPED 791. LEC

**SPED 798 Special Course:** (1-5). A special course designed to address topical issues. LEC

**SPED 800 Classroom Intervention for Language Disorders of Handicapped Learners (3).** Emphasis is given to milestones in normal language acquisition and variation from norms demonstrated by handicapped learners. Attention is also given to techniques for teaching language to children with learning disabilities. Prerequisite: SPED 425 or SPED 725. LEC

**SPED 801 Basic Practicum in School Psychology (4).** Supervised practice in the application of psychological theory to educational settings. Includes work useful with exceptional children as well as experiences in the application of such areas as mental hygiene and learning theory to problems involving the total school population. (Same as PRE 911.) Prerequisite: Permission of instructor. FLD

**SPED 802 Advanced Practicum in School Psychology (4).** A continuation of SPED 801 with special emphasis on remedial techniques associated with learning difficulties. (Same as PRE 911.) Prerequisite: SPED 801 and permission of adviser and instructor. FLD

**SPED 804 Designing Online Instruction for E-Learning Environments (3).** The focus of the course is on the status of e-learning at the K-12 and postsecondary levels and the process of designing content for e-learning applications. Attention will be given to content structuring, development, evaluation, and collaboration in the process of working with technicians in the process of developing online curriculum and instruction. Prerequisite: None. A background in education is preferred. LEC

**SPED 805 Practicum in Public School Testing (4).** Practice training, by arrangement, in administration and interpretation of test results for school situations with particular emphasis on the Stanford-Binet. Prerequisite: Permission of instructor. FLD

**SPED 810 Language Assessment and Instruction II: Learners with Hearing Loss (3-6).** The purpose of this course is to prepare students to provide effective assessment and instruction to students who are deaf or hard of hearing. A historical review of the emphasis placed on speech development in deaf students will be presented. Students will learn formal and informal methods of assessment, developmental order and classification systems for English language sounds, and visual, auditory, and tactile facilitation techniques. Auditory training programs and techniques will be emphasized. LEC

**SPED 811 Speech Assessment and Instruction III: Learners with Hearing Loss (3-6).** The purpose of this course is to prepare students to provide effective assessment and instruction to students who are deaf or hard of hearing. This course focuses on the effect of hearing loss on assessment, language and reading, communication options, and instructional strategies. LEC

**SPED 812 Methods of Teaching Subjects to the Deaf (3).** Focus is on development of skills in adapting materials and methods of teaching science, math, social studies, spelling, and writing to hearing impaired students. Emphasis is placed on problems, trends and procedures used in career education, reading, and general education. Prerequisite: SPED 425 or SPED 725. LEC

**SPED 814 Instructional Approaches in Inclusive Elementary Settings (2).** This advanced method course provides curriculum design and instructional procedures appropriate for students at the elementary and middle school levels, including functional academic, social and community life skills. NOTE: This is a 3 credit course to be offered during the first 8 weeks of a semester. It will precede SPED 814 in the same semester. Prerequisite: SPED 614 or SPED 714: Learning Styles and Instructional Accommodations. LEC

**SPED 815 Instructional Approaches in Inclusive Secondary Settings (2).** This advanced method course provides curriculum design and instructional procedures for students at the secondary level, including career preparation and transition from school to adult life in the community. Prerequisite: SPED 614 or SPED 714: Learning Styles and Instructional Accommodations. LEC

**SPED 816 Program Planning in Special Education—Early Childhood (3).** This course is designed to provide knowledge and skills to implement federal and state development mandates for special education and related services programs for young children from birth to age three years old. This course focuses on the identification, assessment, implementation, and evaluating (a) instructional accountability for these children’s participation in the general early childhood curriculum, (b) relationships between general and early education environments and program responsibilities; (c) interdisciplinary team planning including families; (d) coordinating, educating, and supervising paraeducators; and (e) general management responsibilities associated with instruction of young children with disabilities. Prerequisite: SPED 760 or SPED 866, which may be taken concurrently. LEC

**SPED 841 Advanced Methods and Assessment: Learning Strategies and Content Enhancements (3).** This course is based on the principles of strategic instruction. Specific learning strategies and content enhancement teaching routines are presented; students will implement these tools in classroom settings. Teaching routines that facilitate strategic learning during classroom activity that compensate for inefficient learning will be introduced, evaluated, and implemented in classroom settings. The focus is strategy and routine implementation to help students in general education classrooms achieve, store, and express information. This course will also include assessment and evaluation of implementation, and interaction with others in school, home, community, and employment settings. Course content will focus on learning how to select learning strategies that match student needs and develop curricula as well as the selection of materials and teaching strategies to meet specific needs. Prerequisite: SPED 631 or SPED 731, and SPED 641 or SPED 741. LEC

**SPED 842 Advanced Methods: Strategies for Students with Significant Sensory, Motor, and Health Needs (2).** In this course, students learn assessment techniques and strategies for students with sensory, motor, and health impairments and complex medical needs. Students will learn use of residual and alternative senses; proper positioning and transfer for students with motor impairments, nutrition, hydration, and medical monitoring, and seizure activity. Students will develop strategies and goals and design and implement appropriate services to inclusive educational settings, embed sensory and motor skills and train into the general education curriculum, adapt materials and apply assistive technologies. Prerequisite: SPED 632 or SPED 732, and SPED 742. LEC

**SPED 843 Advanced Methods and Assessment: Strategies for Students with Significant Behavioral, Social, and Emotional Needs (3).** This course is designed to in-
roduce educators and related service professionals to prevention and intervention related to a broad range of intellectual, affective, and behavioral disorders. Some of the course contents include definitions of disabilities, learning disabilities, emotional, and behavioral disorders. Emphasis is given to understanding disabilities in community employment, living, socialization, community participation, and self-determination. Students learn to apply special education and related services provided to individuals with disabilities in the school setting with consideration for their role as educators and related service providers.

SPED 870 Education of Children and Youth with Disabilities: (3) A course designed to prepare students to implement specialized alternative strategies for individualized group instruction. Methods for developing and implementing overall educational programs for students with disabilities are emphasized. Procedures for developing and implementing instructional materials are emphasized. Procedures for managing classroom staff and service resources, coordinating educational programs with other service personnel and program support staff, and monitoring overall program effectiveness are addressed. Prerequisite: SPED 760. LEC

SPED 874 Planning for Adult Outcomes: (1-3) The problems, trends, issues, and procedures used in planning life skills, occupational and vocational skills, and transition from school to adult living for persons with disabilities. Separate sections will be organized by topics pertaining to career/vocational development, assessment, and transition programs and services. These will include: (a) transitions from early childhood to adulthood, (b) application of assessment information, and (c) vocational preparation and employment. Prerequisite: SPED 760. LEC

SPED 875 Practicum with Children and Youth with Disabilities: (1-10) This course is designed to provide intensive field work and direct teaching experiences with children and youth with disabilities in educational, residential, and clinical settings. Prerequisite: SPED 775. LEC

SPED 897 Independent Study: (1-4) Prerequisite: Consent of adviser and instructor. RSH

SPED 898 Master’s Project: (1-4) RSH

SPED 899 Master’s Thesis: (1-6) THE

SPED 910 Advanced Application of Behavioral Management Techniques to Exceptional Children and Youth: (3) Designed for individuals with responsibilities for the operation of instructional resource centers and educational programs serving exceptional children and youth. Emphasis is given to the application of behavioral principles of behavioral analysis. Emphasis will be given to observation, measurement, recording, and visual display techniques. Other topics include inclusion and generalization of behavior change. Students will be provided opportunities to develop research study related to exceptional children and youth with disabilities. Prerequisite: SPED 425 or SPED 725. RSH

SPED 915 Advanced Curriculum Development for Children and Youth with Disabilities: (3) This course is designed to provide principles of development, needs assessment, evaluation and dissemination applied to curriculum products. Analysis of organizational and conceptual features of major curriculum development projects for students with disabilities are addressed; participants design curriculum procedures. Prerequisite: Twelve semester hours in special education and a general core curriculum course. LEC

SPED 920 Management of Instructional Resources for Exceptional Children and Youth: (3) Designed for individuals with responsibilities for the operation of instructional resource centers and educational programs serving exceptional children and youth. Emphasis is given to selection, acquisition, and utilization of instructional materials for the instruction of children and youth with disabilities. Prerequisite: SPED 425 or SPED 725. RSH

SPED 925 Medical Aspects of Handicapping Conditions: (3) The organization of this course follows the chronology of an individual’s total development from genetic origin through fetal development, perinatal, infancy, childhood, and adolescence. Emphasis is given to current and developing medical and behavioral conditions on development. Attention is given to prevention, treatment, and habilitation or rehabilitation of various conditions. Prerequisite: SPED 725. LEC

SPED 949 Specialist Research: (1-4) RSH

SPED 950 Civic Professionalism: (3) This course is concerned with the relationship between professionals and other groups. Emphasis is placed upon the ethical and other disability-related fields. Models of professionalism are compared and advantages of civic professionalism for individuals with disabilities and their families, the professions, and society as a whole are explored. Lessons drawn from

Graduate Catalog

Special Education

119
disagreements over questions such as the nature and social consequences of the professions are used to broaden understanding of what professionalism could and should be in a democracy. Prerequisite: Admission to doctoral program. LEC

SPED 970 Problems of Exceptionality: (3). An extensive analysis of the literature and research pertinent to issues in a given disability. Separate sections are organized for various disabilities. Students may enroll in more than one section as a part of a graduate program. Prerequisite: Three courses in special education or permission of instructor. LEC

SPED 971 Organization and Administration of Services for Children and Youth with Disabilities (3). This course is designed to assist advanced doctoral students organize and synthesize a conceptual and substantive map of the field of special education and introduce them to corresponding faculty research interests and resources. Emphasis is placed on the academic writing expectations and resources of the field, university, and department, and on building a cohort of students to address common issues and to provide a foundation for peer support throughout the doctoral program. Prerequisite: Admission to special education doctoral program or permission of instructor. LEC

SPED 972 Issues and Trends in Special Education I (2). This course is designed to assist first-year special education doctoral students organize and synthesize a conceptual and substantive map of the field of special education and introduce them to corresponding faculty research interests and resources. Emphasis is placed on the academic writing expectations and resources of the field, university, and department, and on building a cohort of students to address common issues and to provide a foundation for peer support throughout the doctoral program. Prerequisite: Admission to special education doctoral program or permission of instructor. LEC

SPED 973 Issues and Trends in Special Education II (2). This capstone seminar is designed to assist advanced doctoral students to analyze and evaluate information on a broad range of current and historically significant special education issues and trends in preparation for comprehensive examinations and future professional roles. Subsequently, secondary focus is issued that affect the entire field or cut across several areas of study and practice. Its secondary focus is significant issues and trends that affect particular categorical or functional sub-areas of study and practice within the field. Prerequisite: Completion of nine doctoral courses in special education, including 4 of 6 departmental Core courses. LEC

SPED 974 Issues and Trends: Students with Learning Disabilities (3). This doctoral level course will explore current issues related to characteristics, educational methods and curricula, and questions, problems, concerns and movements connected to the education of children and youth with learning disabilities. Emotional/behavioral disorders and autism spectrum disorders. Prerequisite: Doctoral program admission or permission of instructor. LEC

SPED 975 Advanced Practicum with Children and Youth with Disabilities: (1-10). Advanced development of conceptual and practical field-based skills. Prerequisite: SPED 775. FLD

SPED 977 Learning Disabilities/Behavioral Disorders Issues II (3). This course is designed to provide students an opportunity to engage in an extensive analysis of the literature and research pertinent to critical issues in the field of learning and behavioral exceptionality. Prerequisite: SPED 970 LD/BD Issues I; SPED 972 Trends and Issues in Special Education I. LEC

SPED 980 Advanced Topics: (1-3). A special course of study to meet current needs of education professionals—primarily for post-master’s level students. LEC

SPED 983 Leadership and Systems Change (3). This course is designed to provide students with an overview of seminal leadership and systems change literature. Students analyze and apply the literature at the teacher, family, school building, district, state, and federal levels. Strategies for developing and mobilizing stakeholders to support the process of change will be covered. Prerequisite: Admission to doctoral program. LEC

SPED 982 Preparing Future Faculty (3). This course is designed to give students an introduction and overview of academic life and the roles and responsibilities of an academic career. Its primary purpose is to help develop a realistic perspective of the expectations of academic life and the competencies required for a successful start in an academic career. Organized around the broad themes of understanding the academy, faculty life and work, and academic career paths, course content addresses the roles and responsibilities of faculty life in different types of institutions and the issues faculty face as they pursue their academic careers. The course offers an opportunity for students to critically review their doctoral program in the context of preparing them for a successful start in an academic career and to explore options for academic career choices. Prerequisite: Doctoral program admission. LEC

SPED 985 Naturalistic Research (3). This course is designed to develop skills in naturalistic or constructivist research, while situating it theoretically within the broader framework of modern and postmodern social inquiry, and exploring its social, political, and ethical implications. The course develops students’ skills in using this form of interpretative qualitative research, provides a theoretical framework for selecting inquiry paradigms, compares and contrasts positivist and constructivist inquiry, and reviews social and political implications of constructivist inquiry. Prerequisite: Six hours of statistics, measurement, and/or large or small group research design. LEC

SPED 986 Trends and Issues Associated with Online Instruction (3). The course examines the opportunities, challenges, cautions, and demands of web-based instruction in higher education. It explores the policy implications of web-based instruction, development of collaborative teaming skills utilizing telecommunications resources, and the design and technical aspects of online instruction. Particular attention is given to the implications of online instruction for accommodating needs presented by diverse learners through strategies such as universal design. Prerequisite: Admission to doctoral program or permission of instructor. LEC

SPED 992 Seminar in Early Childhood/Intervention (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

SPED 998 Seminar in: (1-4). LEC

SPED 999 Doctoral Dissertation (1-15). THE

Visual Art Education
See the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.
See pages 12-13 for admission procedures.

Application fees: Domestic students in engineering: paper $55, online $45.
International students in engineering: paper $60, online $55.
Admission

Procedure
Admission requirements are the general KU requirements, with the following additions: one official copy of undergraduate transcripts, transcripts of any graduate work, and three letters of recommendation from references. Some departments and programs require the Graduate Record Examination. Applications must be accompanied by a nonrefundable fee. See Admission in the General Information chapter of this catalog.

Baccalaureate Preparation
To qualify for graduate work in any field of engineering, a student generally must hold an accredited baccalaureate degree in that field and have a 3.0 grade-point average. A student with good preparation in such fields as mathematics, chemistry, or physics, or in a related engineering field, may be admitted on the basis of performance in specific undergraduate courses, determined by the department of interest to the prospective student. Undergraduate hours do not count as part of a student’s Plan of Study, but they must be completed with grades of B or higher.

Exceptionally qualified undergraduates may be admitted directly to a Fast-Track Ph.D. program, which does not require the master’s as an intermediate degree. Students who wish to earn a Ph.D. and believe that they meet this criterion are encouraged to contact the graduate adviser in their field of interest.

English Proficiency Requirement
All graduate students in the School of Engineering who are required to take courses at the Applied English Center must pass the AEC’s English Proficiency Examination within three semesters of their initial enrollment. Failure to complete the English proficiency requirement within this time limit results in dismissal from the graduate engineering program.

Graduate Grade-Point Average Requirement
In addition to completing a Plan of Study that is formally approved by his or her committee and other requirements appropriate to the graduate degree, a student must (1) attain and maintain at least a 3.0 grade-point average in all graduate courses and (2) attain and maintain at least a 3.0 grade-point average in all course work, including undergraduate courses taken to make up background deficiencies, except for courses taken at the Applied English Center.

Facilities
Engineering faculty members and graduate students are major users of the facilities and services of many research laboratories and centers across campus and among our research partners at other universities. The largest facilities are the university’s Designated Centers (DC):
- Center for Environmentally Beneficial Catalysis (DC)
- Information and Telecommunication Technology Center (DC)
- Center for Remote Sensing of Ice Sheets (DC)
- Transportation Research Institute
- Bioengineering Research Center
- Tertiary Oil Recovery Project
- Flight Research Laboratory
- Environmental Engineering and Science Research Laboratory
- Infrastructure Research Institute
- Hibachi Biosciences Center
- Intelligent Systems Laboratory
- Center for Advanced Scientific Computing
- Center for Science Education
- Kansas Biological and Geological Surveys
- Institute for Policy and Social Research

Degree Programs
The Master of Science degree is offered in aerospace engineering, architectural engineering, bioengineering, chemical engineering, civil engineering, computer science, electrical and computer engineering, engineering management, environmental engineering or science, information technology, mechanical engineering, and petroleum engineering.

The Master of Engineering is offered only in aerospace engineering.

The Department of Civil, Environmental, and Architectural Engineering offers the Master of Civil Engineering and the Master of Construction Management.

The school offers a Ph.D. degree in aerospace engineering, bioengineering, chemical and petroleum engineering, civil engineering, computer science, electrical engineering, environmental engineering or science, and mechanical engineering. Doctoral students interested in careers in research or teaching or both should consider the Ph.D. degree. Exceptionally qualified undergraduates may be admitted directly to a Fast-Track Ph.D. program.

For students interested in careers in engineering design or engineering project management, the school offers programs leading to the Doctor of Engineering (D.E.) degree in aerospace engineering, civil engineering, electrical engineering, and mechanical engineering. For information on graduate studies in petroleum management, contact the Department of Chemical and Petroleum Engineering or the School of Business.

KU has 42 nationally ranked programs — 15 in the top 10 among public universities — according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
Aerospace Engineering

Chair: Mark S. Ewing
Graduate Adviser: Richard Hale
Learned Hall, 1530 W. 15th St., Room 2120
Lawrence, KS 66045-7618, www.ae.engr.ku.edu, (785) 864-4267
Professors: Downing, Farokhi, Taghavi
Professors Emeriti: Lan, Muirhead, Roskam
Associate Professors: Barrett-Gonzalez, Colgren, Ewing, Hale
Assistant Professors: Keshmiri, McLaughlin

The department offers the Master of Science and Master of Engineering with a major in aerospace engineering and the Doctor of Philosophy and Doctor of Engineering in aerospace engineering.

Admission
Submit your application online at www.gra duate.ku.edu. Send all other requested application materials to

The University of Kansas
Department of Aerospace Engineering
Learned Hall, 1530 W. 15th St., Room 2120
Lawrence, KS 66045-7618

M.S. Degree Requirements
The M.S. program has two options. The Thesis Option requires a minimum of 30 credit hours of graduate work including 6 hours earned in the satisfactory completion of a thesis. The Project Option requires a minimum of 33 hours of graduate work with an emphasis on an independent investigation that must include 3 hours of Special Problems, but a thesis is not required. The candidate must pass a final oral examination in which the thesis (or results of the independent investigation) is defended and the candidate demonstrates a working knowledge in aerospace engineering.

M.E. Degree Requirements
The M.E. program emphasizes systems design and management skills rather than the more analytic equivalents of the M.S. program. The entrance requirements are the same as those for the M.S. program. A total of 36 semester credit hours is required, including 6 hours for a design project and 6 hours for an industrial internship. The candidate must pass an oral review of the design project.

Ph.D. Degree Requirements
The program normally includes 60 credit hours of course work beyond the B.S. and the equivalent of 15 hours on a dissertation. A minimum of 15 hours must be distributed in aerodynamics, structures and materials, dynamics and controls, design, and propulsion, with a minimum of one course in each area. An additional minimum of 15 hours of specialization is required in one area. At least 15 hours of graduate-level mathematics beyond the B.S. are required. Credit hours earned in completing a master’s degree can be used to satisfy a portion of these when appropriate. Unique situations can be accommodated with the approval of the graduate adviser and the candidate’s major professor.

In addition to general rules and regulations, a student must meet departmental Ph.D. requirements. After two semesters following the completion of M.S. requirements (or at a comparable level for non-M.S. students), the student is evaluated. To be allowed to continue for the Ph.D., the student must (1) have a minimum grade-point average of 3.5 in M.S. course work, (2) pass a qualifying examination, and (3) submit a Plan of Study.

The qualifying examination tests breadth of knowledge and determines the student’s ability to formulate mathematical representations of real physical situations. The examination covers mathematics and three of these five areas: aerodynamics, aeronautics, structures and materials, dynamics and controls, and propulsion. A student is allowed only two attempts to pass this examination.

After passing the qualifying examination, the aspirant forms an advisory/dissertation committee. This committee must have five members, including at least one from a department other than aerospace engineering. The committee approves the aspirant’s program and administers the comprehensive examination and the formal oral defense of the dissertation.

Transfer students admitted with M.S. degrees must take the qualifying examination and prepare a Plan of Study after the first semester but before the end of the second semester.

When the aspirant has completed most of the course work and satisfied the Foreign Language or Other Research Skills (FLORS) requirement, he or she must take the comprehensive examination. The first part must consist of a written research proposal outlining in some detail the work to be done for the dissertation. The second part is an oral examination in which she or he must defend the research plans and demonstrate competence in her or his particular and related areas. Upon passing the comprehensive examination, the aspirant becomes a candidate for the Ph.D. The dissertation committee directs preparation of the dissertation and approves it. A formal oral and public defense of the dissertation is required before the candidate’s committee, any other interested members of the Graduate Faculty, and the general public.

Students can satisfy the FLORS requirement by selecting and having approved by the committee chair one of these options:

- **Option 1.** Aspirants whose dissertations are primarily theoretical must demonstrate proficiency in computer science and complete 3 hours of graduate courses in instrumentation or experimentation.
- **Option 2.** Aspirants whose dissertations are primarily experimental must demonstrate proficiency in computer science and complete 3 hours of graduate courses in computational methodology.
- **Option 3.** All aspirants can substitute a demonstration of reading proficiency in a non-native foreign language for the proficiency in computer science. This language must be one with a significant body of literature in the aspirant’s dissertation area. Some examples of experimental and computational courses are:
  - **Experimental Courses**
    - AE 705 Structural Vibrations and Modal Testing
    - AE 730 Advanced Experimental Fluid Dynamics
    - AE 732 Introduction to Flight Test Engineering
    - CE 721 Experimental Stress Analysis
  - **Computational Courses**
    - EECS 744 Digital Signal Processing I
    - ME 861 Theory of the Finite Element Method
    - MATH 781 Numerical Analysis I
    - MATH 782 Numerical Analysis II
    - MATH 783 Applied Numerical Methods for Partial Differential Equations

**Note:** Courses taken to satisfy the FLORS requirement cannot also be used to satisfy doctoral degree course requirements.

Two consecutive semesters, excluding summer sessions, must be spent in resident study. During the period of residence the student must be involved full time in academic pursuits, which may include up to half-time teaching or research.

D.E. Degree Requirements
The Doctor of Engineering emphasizes systems design and management skills. Entrance requirements are the same as those for the Ph.D. program. Sixty hours of technical and management courses beyond the B.S. are required. These 60 hours must be distributed as follows:

1. At least 15 semester credit hours of graduate mathematics beyond the B.S.A.E. degree.
2. At least 15 semester credit hours must be taken in engineering management courses.
3. At least 15 semester credit hours of technical courses must be distributed in aerodynamics, structures and materials, dynamics and controls, design, and propulsion.
4. At least 15 semester credit hours of D.E. project.

In addition, 12 hours of industrial internship must be completed. Credit hours earned completing a master’s degree can satisfy a portion of these requirements when appropriate. Unique situations can be accommodated with the approval of the graduate adviser and the major professor.
In addition to general rules and regulations, a student must meet the following departmental requirements. After two semesters following completion of M.S. or M.E. requirements (or at a comparable level for non-M.S. or non-M.E. students), the student is evaluated. To be allowed to continue, the student must (1) have a minimum grade-point average of 3.5 on M.S. or M.E. course work, (2) pass a qualifying examination, and (3) submit a Plan of Study.

The qualifying examination tests the student’s breadth of knowledge and determines his or her ability to apply this knowledge to engineering design and management problems. The examination consists of four parts, covering design and management, mathematics, and two of the following five areas: aerodynamics, astronautics, structures and materials, dynamics and controls, and propulsion. A student is allowed only two attempts to pass this examination.

After passing the qualifying examination, the aspirant forms a project committee of at least five faculty members including at least one from engineering management. Where possible, an appropriate industrial adjunct professor will be a member. One member acts as the principal investigator and/or major professor. The committee approves the Plan of Study and administers the comprehensive examination and the oral defense of the project.

When the aspirant has completed most of the course work and satisfied the computer skill requirements, he or she must take the comprehensive examination. The first part must consist of a written project proposal outlining in some detail the work to be done for the project. The second part is an oral examination in which she or he must defend the project plans and demonstrate competence in his or her particular and related areas. Upon passing the comprehensive examination, the aspirant becomes a candidate for the Ph.D. The project is prepared under the direction of this committee and must be approved by them. A formal oral and public defense of the project is required before the committee, any other interested members of the Graduate Faculty, and the general public.

For the Ph.D. program, the research skills requirement is satisfied when the aspirant demonstrates competence in computer programming, as certified by the Department of Electrical “Engineering and Computer Science.

Note: A course taken to satisfy the FLORS requirement cannot also be used to satisfy doctoral degree course requirements.

A 12-month continuous internship must be served in an industrial or governmental organization before assumption of the project responsibility. This internship must be under joint guidance of a preceptor, who is appointed to the adjunct faculty, and a regular faculty member. The internship requirement cannot be satisfied by working in any KU facility.

Because the internship is a degree requirement and because KU cannot guarantee internship employment, the student must indicate in writing, before completing the first semester as an aspirant for the degree and after passing the qualifying examination, how the internship requirement is to be satisfied. This can be a letter from the faculty adviser indicating a grant availability, notice of a project appointment or assignment, or a letter from a company or agency (U.S. or abroad) expressing willingness to sponsor the student in an internship.

Aerospace Engineering Courses

AE 507 Aerospace Structures I (3).
AE 508 Aerospace Structures II (3).
AE 509 Honors Aerospace Structures (3).
AE 510 Aerospace Materials and Processes (4).
AE 521 Aerospace Systems Design I (4).
AE 522 Aerospace Systems Design II (4).
AE 523 Space Systems Design (4).
AE 524 Propulsion Systems Design I (4).
AE 545 Fundamentals of Aerodynamics (5).
AE 546 Honors Aerodynamics (5).
AE 550 Dynamics of Flight I (3).
AE 551 Dynamics of Flight II (4).
AE 732 Introduction to Flight Test Engineering (3). Course presents flight test principles, instrumentation, planning, and operation of aerospace vehicle flight tests, structured with lectures, laboratories, and flight experiments. Student teams plan and execute a series of flight tests experiments including: familiarization with flight test measurements, static system calibration, rate-of-climb performance, and determination of vehicle flight dynamics. Prerequisite: AE 445 and AE 550 or consent of instructor. LEC

AE 743 Compressible Aerodynamics (3). Compressible flow with heat and friction; shock polars, 1-D unsteady gas dynamics, shock tube, conical flows, methods of characteristics, hypersonic flow theory. Prerequisite: AE 545. LEC

AE 745 Applied Wing and Airfoil Theory (3). Applications of potential flow theory to aerodynamics of airfoil sections; wings and wing-body combinations. Introduction to high angle-of-attack and transonic aerodynamics. Prerequisite: AE 545. LEC

AE 746 Computational Fluid Dynamics (3). Applications of numerical techniques and digital computers to solving fluid flow problems. Solutions involving incompressible and compressible flows, inviscid and viscous flows. Finite difference techniques for different types of partial differential equations governing the fluid flow. Prerequisite: AE 545. LEC

AE 748 Helicopter Aerodynamics (3). Helicopter components and their functioning; rotor aerodynamic performance, stability and control, aeroelastic effects and vibrations. Prerequisite: AE 551. LEC

AE 750 Applied Optimal Control (3). Introduction to optimal control analysis and design tools useful for the design of Multi-Input/Multi-Output controllers. Linear Quadratic Regulator problem extended by including advanced command techniques and advanced controller structures. The techniques are illustrated with aero-space applications. Prerequisite: AE 551 or ME 682 or consent of instructor. LEC


AE 753 Digital Flight Controls (3). Introduction to the classical Z-plane analysis and design tools useful for the design of control systems containing continuous dynamics and a digital computer. Mathematical modeling of the digital computer and design of digital compensators. Aerospace applications used to demonstrate the concepts. Prerequisite: AE 551 or ME 682 or consent of instructor. LEC


AE 755 Robust Control of Nonlinear Systems (3). Basics and application of robust control, where the dynamic systems modeling is nonlinear. This course develops the fundamentals of robust control (uncertainty, disturbances, noise, singular values, sensitivity function, norms), the tools for robust control (small gain theory, Lyapunov theory, stability theory, loop shaping), basics of nonlinear systems (concepts of nonlinearities, phase-plane, nonlinear models, nonlinear elements, nonlinear behavior, nonlinear controls), rudiments of robust nonlinear control (nonlinear uncertain systems, describing functions, dynamic inversion), including applications of the linearized methods. Prerequisite: AE 524. LEC

AE 760 Spacecraft Systems (3). Fundamentals of spacecraft systems and subsystems. Spacecraft systems engineering, space environment; basic astrodynamics; and the following spacecraft subsystems; attitude determination and control; electrical power; thermal; propulsion; structures and mechanisms; command, telemetry, and data handling; and communications. Same as AE 560 with the addition of a research paper. Not available for students that have taken AE 560. Prerequisite: AE 507, ECE 518, MATH 124, and ME 312 or equivalents. LEC

AE 765 Orbital Mechanics (3). Motion of space vehicles under the influence of gravitational forces. Two body trajectories, orbit determination, orbit transfer, universal variables, mission planning using patched conics. Transfer orbits. Prerequisite: MATH 220, MATH 290, and CE 301 or equivalent. LEC

AE 766 Spacecraft Attitude Dynamics and Control (3). Dynamics of rigid spacecraft, attitude control devices including momentum exchange, mass movement, gravity gradient and rocket rockets. Design of feedback control systems for linear and bang-bang control devices. Prerequisite: AE 551 or permission of instructor. LEC

AE 767 Spacecraft Environments (3). Fundamentals of spacecraft environments. Description and analysis of the natural environment in which spacecraft operate post-launch. Includes optical, electromagnetic, corpuscular radiation, plasma and dust from low Earth orbit, through outer heliosphere. Prerequisite: PHSX 212 required, PHSX 313 or PHSX 351 recommended. LEC

AE 768 Orbit Determination (3). Develops the theory of batch and sequential (Kalman filter) estimation theory related to orbit estimation including a review of necessary concepts of probability and statistics. Course work includes a term proj- ect that allows students to apply classroom theory to an extensive orbit deter- mination problem. Prerequisite: AE 360. Corequisite: AE 560 or AE 760. LEC

AE 771 Rocket Propulsion (3). Basic elements of rocket propulsion: systems, propellants, and performance. Prerequisite: AE 545 or equivalent. LEC


AE 781 Introduction to Adaptive Aerostructures (3). This course covers the basic material properties and modeling techniques for structures that are capable of changing some physical property in response to a command signal. The course will be useful to students from nearly every branch of engineering and includes a fabrication and testing practicum introducing basic post processing and integration techniques used with piezoelectric, shape memory alloy and magnetoreo- logical materials. The course concludes with an overview of applications and examples of adaptive products. Prerequisite: ME 311 or equivalent. LEC

AE 790 Special Problems in Aerospace Engineering (1-5). Directed studies of ad- vanced problems in aerospace engineering. Open only to graduate students with departmental approval. RSH


AE 822 Advanced Aircraft Design II (3). Design of flight control systems, fuel systems, hydraulic systems, and electrical systems. Weapon system integration problems, design for low radar cross sections. The kinematics of landing gear retraction systems. LEC

AE 830 Aerospace Graduate Internship (1-12). One credit hour per month of approved aerospace engineering internship satisfying one of the requirements for flight or Ph.D. program. Grades of a, b, or unsatisfactory basis. FLD


AE 850 Advanced Control Seminar (2). Extension of AE 750 covering digital optimal control, optimal estimation, and advanced control topics. Combination of lecture, semi- nars, and project format. Review of current journal articles. Development of analysis and design computer programs. Prerequisite: AE 750 and consent of instructor. LEC

AE 890 M.E. Internship (1-6). One credit per month of engineering internship. Prerequisite: Admission to Master of Engineering in Aerospace Engineering program and approved internship. FLD

AE 892 Special Problems in Aerospace Engineering (1-8). Directed studies of ad- vanced problems in aerospace engineering. Open only to graduate students with consent of instructor. RSH

AE 895 M.S. Thesis (1-10). THE

AE 896 M.E. Project (3-6). A design problem or system study satisfying the project requirement for the Master of Engineering degree in Aerospace Engineering. Prereq- uisite: Admission to Master of Engineering in Aerospace Engineering program. THE

AE 941 Hypersonic Aerodynamics I (3). The gasdynamics of aerospace vehicles operating in the speed range above Mach 5. Rarefied and dissociated gas flows; magnetogasdynamic and heat transfer problems. Prerequisite: Consent of instructor. LEC

AE 990 D.E. Internship (1-12). One credit per month of engineering internship. Prerequisite: Admission to D.E. program and approved internship. FLD

AE 996 Ph.D. Dissertation (1-15). Restricted to Aerospace Ph.D. candidates. Prerequisite: Successful completion of Comprehensive Oral Exam. THE

AE 997 Ph.D. Project (1-16). A major design problem or system study satisfying the project requirement for the Doctor of Engineering in Aerospace Engineering degree. Restricted to Aerospace DE candidates. Prerequisite: Successful completion of Comprehensive Oral Exam. THE
Bioengineering

Director: Carl Luchies, luchies@ku.edu
Eaton Hall, 1520 W. 15th St., Room 1
Lawrence KS 66045-7605
www.bio.engr.ku.edu, (785) 864-5258, fax (785) 864-5445

Cooperating Faculty: Bioengineering has more than 40 affiliated faculty members (see www.bio.engr.ku.edu for a complete list) in research laboratories on KU’s Lawrence and KU Medical Center campuses.

Track Directors: Chen (Bioinformatics), Cook (Bioimaging), Detamore (Biomaterials and Tissue Engineering), Friis and Wilson (Biomedical Products Design and Development), Luchies (Biomechanics and Neural Engineering), Southard (Biomolecular Engineering)

The bioengineering graduate program prepares students to become leading researchers, educators, and entrepreneurs. The program provides knowledge breadth in engineering and the biological sciences and knowledge depth in the student’s area of research interest. The program offers the Master of Science and Doctor of Philosophy degrees in bioengineering and the M.D./Ph.D. combined degree in conjunction with the KU School of Medicine. Students have access to innovative research and educational facilities on KU’s Lawrence and KU Medical Center campuses. The student selects from six tracks:

1. bioimaging, (2) bioinformatics, (3) biomaterials and tissue engineering, (4) biomechanics and neural engineering, (5) biomedical products design and development, and (6) biomolecular engineering. The student, in consultation with his or her adviser and advisory committee, develops a Plan of Study and a research program to satisfy degree requirements.

The program’s goals are: (1) to give students an in-depth understanding of mathematics, engineering principles, physics, chemistry, physiology, and modern biology; (2) to train students to apply basic sciences to biological problems using engineering principles; (3) to train students to do bioengineering research and solve problems related to the design and development of diagnostic and therapeutic technologies that improve human health; and (4) to train students to apply bioengineering research to commercially viable technologies. Bioengineering research projects typically focus on one of two broad categories: (1) the development of fundamental scientific knowledge and (2) the development and application of materials, devices, and systems with the goal of improving biological processes, systems, and health care. The bioengineering student often is involved in measurements, analysis, modeling, computations, design, and development. The program prepares students for careers in industry, academia, health care settings, or government.

Admission

The applicant is expected to have (from an accredited post-secondary institution) a minimum grade-point average of 3.25 on a 4.0 scale in her or his B.S. program for entry into the M.S. program and a minimum grade-point average of 3.5 on a 4.0 scale in her or his B.S. and/or M.S. program for entry into the Ph.D. program. The appropriate academic preparation includes both general and track prerequisites. General prerequisites include calculus I and II, differential equations, linear algebra, general physics I and II, chemistry, and biology. Track prerequisites depend on the student’s track of study. More complete details about academic preparation can be found on the Web site. Applicants normally have a B.S. and/or an M.S. degree in an engineering discipline, physical sciences, the life sciences, or a closely related field. Students with a degree in an engineering discipline outside of bioengineering may be required to take additional courses (e.g. in the life sciences). Students with a degree from outside of engineering may be required to take additional courses (e.g. in the physical sciences, mathematics, and engineering). These additional courses generally do not count toward the graduate degree.

A highly qualified applicant (with a grade-point average higher than 3.75) may apply for admission directly into the Ph.D. program after completing the B.S. degree. Generally, a student who does not have an undergraduate degree in an engineering discipline must complete the M.S. before entering the Ph.D. program.

A student may enter the bioengineering graduate program before meeting all the prerequisites if approved by the graduate studies committee. This student must plan to complete the prerequisites during the program in addition to the degree requirements. Consultation with the program director is required to determine which courses satisfy these requirements. Course credits from prerequisites generally do not apply toward the graduate degree; they must be completed with a grade of B or higher.

Unless the applicant’s native language is English or the applicant has received a baccalaureate degree or higher from an accredited U.S. institution of higher education, he or she must meet the program’s standard for the Test of English as a Foreign Language. Applicants for graduate teaching assistantships must obtain satisfactory scores on the Test of Spoken English.

The application deadline for fall admission is December 15. The deadline for spring admission is September 30.

The applicant must submit transcripts of all college-level work, three letters of recommendation, a letter of intent, and scores from the Graduate Record Examination (verbal, quantitative, and analytical). A strong applicant should have outstanding academic credentials, some formal research experience, research interests that fit one of our tracks of study, and a strong potential for advanced study.

Submit your application online at www.graduate.ku.edu. Send all other required application materials as listed on our Web site, www.bio.engr.ku.edu, to

The University of Kansas
Bioengineering Graduate Program
Eaton Hall, 1520 W. 15th Street, Room 1
Lawrence, KS 66045-7605

Master of Science

Requirements for the M.S. include course work, a thesis, and a final oral examination. In addition to general rules and regulations, the student must meet the program’s M.S. requirements.

In the first semester, the student selects a track of study, an adviser, and an advisory committee. The advisory committee guides the student’s development through the Plan of Study in

Bioengineering provides knowledge breadth in engineering and the biological sciences and knowledge depth in the student’s area of research interest.
the chosen track, helps the student select a topic for research leading to the thesis, and participates in the final oral examination. Should the student’s interests change, the advisory committee membership may be changed accordingly, with the approval of the program’s graduate studies committee.

The student’s advisory committee consists of a minimum of three Graduate Faculty members and is chaired by the student’s adviser. A more detailed description is available on the Web site.

**Course Requirements.** The M.S. program requires a minimum of 30 credit hours beyond the B.S. to meet degree requirements.

- **Core Courses** (6 hours).
- **Track Courses** (18 hours). Students must complete the depth, breadth, and elective courses required in the chosen track (see [www.bio.engr.ku.edu](http://www.bio.engr.ku.edu) for track requirements).
- **Research** (6 hours).

**Thesis and Final Examination.** The M.S. student is expected to conduct original research, prepare a written thesis detailing the results, and defend the thesis in a final oral examination. The research generally is expected to be of sufficient quality to permit publication in reputable scientific journals. The final oral examination is scheduled when the advisory committee agrees that the research is complete.

### Doctor of Philosophy

Requirements for the Ph.D. include course work, a doctoral qualifying examination, research skills and residence requirement, a comprehensive examination, a dissertation, and a final oral examination. In addition to general rules and regulations, the student must meet the program’s Ph.D. requirements.

In the first semester, the student selects a track of study, an adviser, and an advisory committee. The advisory committee guides the student’s development through the Plan of Study in the chosen track, participates in the comprehensive and final examination, and helps the student select a topic for research leading to the dissertation. Should the student’s interests change, the advisory committee membership may be changed accordingly, with the approval of the program’s graduate studies committee.

The student’s advisory committee consists of a minimum of five Graduate Faculty members and is chaired by the student’s adviser. A more detailed description is available on the Web site.

**Course Requirements.** The Ph.D. program requires a minimum of 60 credit hours beyond the B.S. to meet degree requirements.

- **Core Courses** (6 hours).
- **Track Courses** (30-36 hours). Students must complete the number of hours, including the depth, breadth, and elective courses, required in the chosen track (see [www.bio.engr.ku.edu](http://www.bio.engr.ku.edu) for track requirements).
- **Research** (minimum of 18 hours, maximum of 24 hours).

**Residence Requirement.** The doctoral student must spend a minimum of two semesters beyond the baccalaureate degree in full-time graduate study at KU.

**Qualifying Examination.** Each doctoral student must pass the doctoral qualifying examination, normally taken at the end of the first year of graduate study. The written and oral examination measures the student’s ability to comprehend and communicate technical literature in the chosen track of study. The qualifying examination may be retaken once. A more detailed description of the examination, including examples, is available on the Web site.

**Research Skills.** After passing the qualifying examination, the doctoral student must demonstrate proficiency in at least one research skill. Since the needs of each student differ, the research skills are determined with the advice and approval of the advisory committee. Possible research skills include foreign language and computer science.

**Comprehensive Examination.** The doctoral student must take the comprehensive examination after passing the qualifying examination, completing the research skills requirement, and completing at least three-fourths of the course work required in the Plan of Study. The examining committee for the comprehensive examination is generally the student’s doctoral advisory committee. Before the examination, the student must submit in writing to the committee a detailed NIH-R01 style proposal for a possible Ph.D. dissertation project. The comprehensive examination evaluates the student’s ability to write an original research proposal, design experiments, and interpret results in a sound and critical manner. A more detailed description of the examination is available online at [www.bio.engr.ku.edu](http://www.bio.engr.ku.edu). Passing the examination advances the student to doctoral candidacy.

**Dissertation and Final Examination.** The doctoral candidate is expected to conduct original research, prepare a written dissertation detailing the results, and defend the dissertation in a final oral examination. The research is expected to be of sufficient quality to permit publication in reputable scientific journals. The final oral examination is scheduled when the advisory committee agrees that the research is complete.

**M.D./Ph.D. Combined Degree Requirements.** The bioengineering graduate program offers the combined M.D./Ph.D. degrees, in conjunction with the School of Medicine, for the student who wishes to combine a focus on medicine with interests in bioengineering research. The requirements for the Ph.D. component of the M.D./Ph.D. program are the same as for the Ph.D. program. Completion of the M.D./Ph.D. degrees is expected to take approximately seven years. The M.D./Ph.D. student is encouraged to defend the dissertation before clinical rotations. Scholarships are available for both the M.D. and Ph.D. components of the program.

### Financial Aid

All graduate students in the bioengineering graduate program currently are supported through research assistantships, teaching assistantships, or fellowships (e.g. the prestigious Self Fellowship). Research assistantships are arranged between the student and faculty adviser. Highly qualified applicants are considered for additional support and fellowships.

#### Bioengineering Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOE 800</td>
<td>Bioengineering Colloquium (0.5)</td>
<td>A colloquium series featuring speakers from industry, government, other universities, research centers and research organizations of the university campus presenting talks on various topics related to bioengineering. LEC</td>
</tr>
<tr>
<td>BIOE 801</td>
<td>Responsible Conduct of Research in Engineering (1)</td>
<td>Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in bioengineering. Topics include the nature of ethics, the roles of the scientist as a reviewer, entrepreneur, employer and teacher, research ethics in the laboratory, social responsibility and research ethics regulation. Prerequisite: Permission of instructor. LEC</td>
</tr>
<tr>
<td>BIOE 802</td>
<td>Bioengineering Internship (1-6)</td>
<td>An approved bioengineering industrial or clinical internship. The student is supervised by a preceptor at the internship site. Biweekly reports and a final report detailing work performed are filed with the course instructor. Prerequisite: Permission of instructor. FLD</td>
</tr>
<tr>
<td>BIOE 899</td>
<td>Independent Investigation (1-6)</td>
<td>An original and independent research or design investigation involving analytical, experimental and/or modeling methodology applied to solve a bioengineering problem as a part of the degree requirements for the Master of Science. THE</td>
</tr>
<tr>
<td>BIOE 999</td>
<td>Independent Investigation (1-12)</td>
<td>An original and independent research or design investigation involving analytical, experimental and/or modeling methodology applied to solve a bioengineering problem as a part of the degree requirements for the Doctor of Philosophy. THE</td>
</tr>
</tbody>
</table>
### Chemical and Petroleum Engineering

Chair: Laurence Weatherley, lwweatherley@ku.edu  
Learned Hall, 1530 W. 15th St., Room 4132  
Lawrence, KS 66045-7618, www.cpe.engr.ku.edu, (785) 864-4965  
Graduate Adviser: R.V. Chaudhari, 4132 Learned Hall, (785) 864-1634  
Graduate Recruiting Director: Marylee Southard, marylee@ku.edu, 4132 Learned Hall, (785) 864-3868  
Professors: Chaudhari, Davis, Gehrke, Green, Nguyen, Subramaniam, Vossoughi, Weatherley, Willhite  
Professors Emeriti: Bishop, Locke, Maloney, Mesler, Preston, Rosson  
Associate Professors: Berkland, Camarda, Detamore, Howat, Liang, Nordheden, Ostermann, Southard, Stagg-Williams  
Assistant Professors: Guzman, Scurto  
Associate Scientists: McCool, Tsau  
C&PE graduate programs provide an in-depth academic understanding of chemical engineering and petroleum engineering for students who plan careers in academia, research, or development. The department offers the M.S. degree in chemical engineering and petroleum engineering and the Ph.D. degree in chemical and petroleum engineering. See the General Information chapter of this catalog for requirements for admission and degrees.

In the master’s programs, the primary emphasis is on formal course work in engineering and related subjects. Students take a sequence of core courses in heat, mass and momentum transport, thermodynamics, reaction kinetics, applied mathematics, reservoir engineering, and petroleum recovery.

In the doctoral program, the focus is on an independent research project in a significant engineering area. Specific Ph.D. course work depends on that specialization. Specializations reflect the research interests of the faculty. In addition to specialized courses in the department, advanced courses in mathematics and computer science, life sciences, physical sciences, and other branches of engineering may be used to prepare the Ph.D. student for the research project.

These guidelines include departmental requirements and are intended to assist the student and advisory committee in preparing a Plan of Study for the graduate degree.

### Admission

Admission is by approval of the department’s Graduate Faculty on recommendation by the graduate standards committee. Admission is based on demonstrated potential to complete a graduate degree successfully. The measures of performance used in the decision process are undergraduate and graduate grade-point averages, research performance, letters of recommendation, and Graduate Record Examination scores. A student who has not received a degree from a university in an English-based nation also must submit scores from the Test of English as a Foreign Language or International English Language Testing System and is expected to meet general KU requirements.

Admitted students with baccalaureate degrees in chemical or petroleum engineering usually are able to enroll in the graduate core courses listed below. Students with degrees in other branches of engineering or in mathematics, chemistry, physics, or other sciences usually must take some undergraduate course work to provide the necessary background for the graduate courses.

Submit your application online at www.graduate.ku.edu. Send all other requested application materials to

The University of Kansas  
Department of Chemical and Petroleum Engineering  
Learned Hall, 1530 W. 15th St., Room 4132  
Lawrence, KS 66045-7618

#### M.S. Degree Requirements

For an M.S. in chemical engineering, the undergraduate prerequisite courses are C&PE 511, C&PE 512, C&PE 521, C&PE 523, and C&PE 524. For an M.S. in petroleum engineering, the undergraduate prerequisite courses are C&PE 511, C&PE 521, C&PE 527, and C&PE 618. Depending on a student’s academic background and proposed Plan of Study, additional undergraduate prerequisite courses may be required. Up to 3 credit hours of the undergraduate prerequisite courses (numbered 500 or above) may be counted toward the M.S. degree as elective hours.

Before the end of the first semester of M.S. study, each student, with the help of the graduate adviser and the research director, must submit a Plan of Study to the associate dean for research and graduate programs.

Two degree options are available for the M.S. degree in chemical engineering:

**Option A** requires a minimum of 30 credit hours including the graduate core (15 hours) and submission and successful oral defense of a research thesis for 6 hours of credit. Students admitted to this option are considered for research assistantships, teaching assistantships, and fellowships.

**Option B** requires a minimum of 33 credit hours including the graduate core (15 hours). This option does not require a thesis but does require a written report on a 3-hour special project. Students are not eligible for research assistantships and fellowships. They may be considered for teaching assistantships, but priority is given to students in Option A.

Once admitted, students are not allowed to change from one option to the other without faculty approval. A 3.0 grade-point average at the end of each semester of residence is required to maintain regular student status and for graduation. Only the first 6 hours of enrollment in C&PE 803 meet degree requirements.

The following tables represent typical plans of study that might be established by a student and adviser. Only rarely are exceptions in C&PE course work allowed. It is recommended that part of the elective hours be from other departments. For petroleum engineering, if a student has not completed an advanced-level, reservoir-related course in geology as an undergraduate, such a course must be taken as one of the electives.

GEOL 535 Petroleum and Subsurface Geology is recommended.

### M.S. in Chemical Engineering: Option A

#### Chemical Engineering Graduate Core Courses (15 hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;PE 701 Methods of Chemical and Petroleum Calculations</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 721 Chemical Engineering Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 722 Kinetics and Catalysis</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 731 Convective Heat and Momentum Transfer</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 732 Advanced Transport Phenomena I</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Research (9 hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;PE 800 Seminar</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 803 Research</td>
<td>6</td>
</tr>
</tbody>
</table>

#### Thesis

- Oral Examination

#### Electives (6 hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;PE 825 Graduate Problems in Chemical and Petroleum Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

### M.S. in Chemical Engineering: Option B

#### Chemical Engineering Graduate Core Courses (15 hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;PE 701 Methods of Chemical and Petroleum Calculations</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 721 Chemical Engineering Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 722 Kinetics and Catalysis</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 731 Convective Heat and Momentum Transfer</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 732 Advanced Transport Phenomena I</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Electives (15 hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;PE 825 Graduate Problems in Chemical and Petroleum Engineering</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 826 Petroleum Engineering</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 827 Advanced Reservoir Engineering</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 895 Enhanced Petroleum Recovery</td>
<td>3</td>
</tr>
</tbody>
</table>

### M.S. in Petroleum Engineering

#### Petroleum Engineering Graduate Core Courses (12 hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;PE 701 Methods of Chemical and Petroleum Calculations</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 731 Convective Heat and Momentum Transfer</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 771 Advanced Reservoir Engineering</td>
<td>3</td>
</tr>
<tr>
<td>C&amp;PE 795 Enhanced Petroleum Recovery</td>
<td>3</td>
</tr>
</tbody>
</table>

128

THE UNIVERSITY OF KANSAS 2009-2011
Research (9 hours)
C&PE 800 Seminar ................................................................. 3
C&PE 803 Research ................................................................. 6
Thesis
Oral Examination
Electives (9 hours) ................................................................. 9

**Ph.D. Degree Requirements**

**Admission.** Admitted students usually complete the M.S. in chemical or petroleum engineering before they pursue the Ph.D. Students with a completed M.S. degree take the graduate core courses and/or corresponding qualifying examinations based on their previous coursework and training, as specified by the graduate standards committee.

An M.S. student in the thesis option (Option A) may apply for a change of status to Ph.D. aspirant if the student (1) has achieved a grade-point average of 3.6 or higher in the graduate core, (2) has earned no C grades in the graduate core, and (3) has passed the preliminary examination of research. These criteria are evaluated during the third semester of residence by the department’s Graduate Faculty on recommendation of the graduate standards committee. Students who do not meet these criteria must complete the M.S. degree before applying to the Ph.D. program.

In some cases, a student may be admitted directly to the Ph.D. program without an M.S. degree. Such admission normally is granted only when the applicant has clearly demonstrated exceptional performance in an undergraduate program and in any graduate work. Students who are admitted to the Ph.D. degree program and who do not complete an M.S. degree in chemical and petroleum engineering generally must satisfy the same grade-point average and preliminary examination requirements for Ph.D. aspirant status as students admitted to the M.S. program, or they complete the M.S. degree before readmission to the Ph.D. program.

**Preliminary Examination of Research.** The preliminary examination is administered to students requesting admission to the Ph.D. program without earning the M.S. degree. Students taking this examination must have (1) completed the graduate core courses at KU (five in chemical engineering, four in petroleum engineering) with a grade-point average of 3.6 or higher and no C grades and (2) worked with a C&PE adviser at least two semesters on a single research project. Successful completion of the preliminary examination admits the student into the Ph.D. program with Ph.D. aspirant status. The examination determines the student’s aptitudes for

(a) Independent, original, critical thinking;
(b) Planning and organizing a research program;
(c) Use of previous work and background literature to demonstrate understanding of the planned research within the scope of the larger project and ability to conduct that research;
(d) Application of fundamental theory (e.g., equations) to the proposed work;
(e) Effective communication of technical work.

The preliminary examination consists of a written report (five pages maximum), oral presentation (15 minutes maximum), and questions by the examining committee (25 minutes maximum). The written and oral portions are prepared by the student only, with no review or editing by the research adviser or any other person. The written report is submitted to the committee one week before the oral examination. Questions are directed toward determining the five aptitudes listed above. Because this is not a mandated activity of the university or the school, the student’s graduate adviser is responsible for its execution.

The examining committee consists of the members of the student’s thesis committee plus a member of the C&PE faculty not already on the student’s research committee. There are three possible outcomes: Pass, Pass with Restriction (one aptitude of the five is deficient), and Fail (two or more aptitudes are deficient). Pass with Restriction status must be corrected by actions set and documented by the examining committee within the same academic semester. Fail status requires the student to retake the preliminary examination within four months of the initial examination. The examination can be repeated once. A second failure automatically transfers the student to the M.S. program. Students who do not pass the preliminary examination are not eligible to take qualifying examinations until they have passed the M.S. thesis defense.

**Qualifying Examinations.** Students entering the Ph.D. program with the M.S. degree must show competence in the areas of the graduate core: computation, transport phenomena, thermodynamics, and kinetics (chemical engineering option); and computation, transport phenomena, reservoir engineering, and enhanced resource recovery (petroleum engineering option). Students take a qualifying examination over each graduate core course the first time it is offered after they complete the course, or within the first year of Ph.D. study, as appropriate. Qualifying examinations are only open to students who already hold the M.S. degree.

Each qualifying examination normally is written and graded by the instructor who last taught the course and is of equivalent difficulty to the final examination for that course. A qualifying examination is waived for a student who completes the graduate core course in that subject at KU with a grade of A or with a grade of B and a B+ on the final examination. Other waivers may be made at the discretion of the graduate standards committee.

The graduate standards committee evaluates competence, taking into account student performance in courses and qualifying examinations. Possible decisions are

(a) A student becomes a Ph.D. aspirant and continues in the program.
(b) A student who does not pass a portion of the qualifying examination must retake that particular area of the examination at the end of the following semester.
(c) At the committee’s discretion, a student showing a lack of competence a second time may be dismissed from the program.
(d) A student is dismissed from the program due to a clear lack of competence in multiple subject areas.

Based on the decision, the committee makes a recommendation to the departmental faculty about the student’s status.

(a) If performance has been satisfactory, the committee recommends that the student be designated a Ph.D. aspirant.
(b) If performance has been clearly unsatisfactory, the committee recommends that the student be dropped from the program.

Once a student has been designated a Ph.D. aspirant, it is the responsibility of the Ph.D. advisory committee to monitor progress. **Ph.D. Advisory Committee.** An advisory committee of four or more faculty members is formed for each student when the student is designated a Ph.D. aspirant. The research director normally serves as the committee chair. The committee works with the aspirant to develop an appropriate overall Plan of Study and monitors the progress of the student throughout the remainder of the Ph.D. program.

KU’s program in petroleum engineering ranked ninth in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
Plan of Study and Foreign Language or Other Research Skills Requirement. A formal Plan of Study is drawn up, approved by the advisory committee, and submitted to the associate dean for research and graduate programs.

Credit hours for the Ph.D. degree normally consist of 15 hours of course work beyond the graduate core and 30 to 34 hours of research work as specified in the following table:

**Ph.D. Courses in Chemical and Petroleum Engineering (15-18 credit hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;E 800</td>
<td>Seminar</td>
<td>1-3</td>
</tr>
<tr>
<td>C&amp;E electives</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Outside electives</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>C&amp;E 902</td>
<td>Preparation for the Ph.D. Comprehensive Examination</td>
<td>3</td>
</tr>
</tbody>
</table>

**C&E Research (30-34 credit hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;E 825</td>
<td>Graduate Problems in Chemical and Petroleum Engineering</td>
<td>2-4</td>
</tr>
<tr>
<td>C&amp;E 904</td>
<td>Research</td>
<td>30</td>
</tr>
</tbody>
</table>

The following guidelines apply in selection of course work.
1. Enrollment in the C&E seminar (C&E 800) every semester in residence, usually for 1 credit hour. Students who are required to attend another seminar to satisfy a fellowship or research program requirement may enroll in both seminars for 0.5 credit hour each. Any schedule conflicts should be discussed with both seminar coordinators.
2. Enrollment in at least three graduate-level C&E courses. These do not include C&E 902 Preparation for the Ph.D. Comprehensive Examination or any graduate seminars. All courses in the C&E department that count toward the Ph.D. degree must be numbered 700 or above.
3. Enrollment in at least two courses (normally 6 hours) numbered 700 or above outside the department.
4. For non-KU students, the KU equivalents of courses that have already been counted toward another degree do not count toward the Ph.D. degree.
5. Normally C&E 825 Graduate Problems in Chemical and Petroleum Engineering is connected in some way to thesis research and counted as research credit. However, if C&E 825 is used to broaden and diversify the student’s knowledge, a maximum of 3 hours is allowed as course credit.

These guidelines aid in preparing the program for most Ph.D. students. However, there may be exceptions, arising from the student’s academic background and the type of research, when the selection of courses may not adhere to these guidelines. In such exceptional cases, the student’s Ph.D. program must have the approval of the graduate standards committee.

Students must complete a Foreign Language or Other Research Skills (FLORS) requirement based on the research specialization chosen. Work done to fulfill this requirement should involve study in an area complementary to the selected research and should enhance the student’s ability to carry out the research. The FLORS requirement may be satisfied by completing course work in the Plan of Study and/or by demonstrating proficiency in the specialization area. The committee specifically-designates those components of the Plan of Study that are to fulfill the FLORS requirement.

**Comprehensive Examination.** The aspirant takes the comprehensive examination after completion of a majority of the course work for the Ph.D. and all department, school, and general requirements prerequisite to this examination, including the FLORS requirement. The examination consists of two parts: a written proposal for research and an oral examination based on, but not limited to, the research proposal.

For the research proposal, the student is assigned a topic of current interest to the chemical and/or petroleum engineering profession. This assignment is made by an examining committee of at least five persons, including the advisory committee and at least one person outside the department. The aspirant identifies a research problem in the assigned topic area and prepares a written proposal for research on this problem. Normally, the written proposal must be prepared over a specified time period of 30 consecutive days. Except in unusual circumstances, the problem must be distinctly different from the dissertation problem.

The examining committee evaluates the research proposal upon completion. If the committee judges it satisfactory, the oral examination part of the comprehensive examination is held. The oral examination is based on the research proposal but also may cover areas peripheral to the proposal.

A student must pass both parts of the examination. Failure of either part constitutes an Unsatisfactory grade on the entire examination. An aspirant who receives a grade of Unsatisfactory may repeat the examination upon the recommendation of the examining committee, but under no circumstances may it be taken more than twice. The examination may not be repeated until at least 90 days have elapsed since the unsuccessful attempt.

To prepare the aspirant for the comprehensive examination, the advisory committee may require enrollment in C&E 902 Preparation for the Ph.D. Comprehensive Examination during the first year of the Ph.D. program.

**Ph.D. Dissertation and Final Oral Examination.** The doctoral dissertation, based on independent research conducted by the candidate, constitutes the final phase of the doctoral work and must be completed within the prescribed time constraints. Upon acceptance of the dissertation by the advisory committee, the candidate defends the dissertation in a final oral examination. The examining committee consists of at least five persons, including the advisory committee members and at least one person from outside the department.

**Chemical and Petroleum Engineering Undergraduate Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;E 111</td>
<td>Introduction to the Profession</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 117</td>
<td>Introduction to Petroleum Engineering Profession I</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 121</td>
<td>Introduction to Computers in Engineering</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 127</td>
<td>Introduction to Petroleum Engineering Profession II</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 211</td>
<td>Material and Energy Balances</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 221</td>
<td>Basic Engineering Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 511</td>
<td>Momentum Transfer</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 512</td>
<td>Process Engineering Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 517</td>
<td>Reservoir Engineering I</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 521</td>
<td>Heat Transfer</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 522</td>
<td>Economic Appraisal of Chemical and Petroleum Projects</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 523</td>
<td>Mass Transfer</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 524</td>
<td>Chemical Engineering Kinetics and Reactor Design</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 527</td>
<td>Reservoir Engineering II</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 528</td>
<td>Well Logging</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 613</td>
<td>Chemical Engineering Design I</td>
<td></td>
</tr>
<tr>
<td>C&amp;E 615</td>
<td>Introduction to Process Dynamics and Control</td>
<td></td>
</tr>
</tbody>
</table>

The Kurata Thermodynamics Laboratory is a research facility in the Department of Chemical and Petroleum Engineering.

The university’s Tertiary Oil Recovery Project has been named as one of the most significant for the state’s economy.
Chemical & Petroleum Engineering

C&PE 616 Chemical Engineering Laboratory I
C&PE 617 Drilling and Well Completion
C&PE 618 Secondary Recovery
C&PE 619 Petroleum Engineering Laboratory I
C&PE 623 Chemical Engineering Design II
C&PE 624 Plant and Environmental Safety
C&PE 626 Chemical Engineering Laboratory II
C&PE 627 Petroleum Production
C&PE 628 Petroleum Engineering Design
C&PE 629 Petroleum Engineering Laboratory II
C&PE 651 Undergraduate Problems
C&PE 654 Biocatalysis
C&PE 655 Introduction to Semiconductor Processing
C&PE 656 Introduction to Biomedical Engineering
C&PE 657 Polymer Science and Technology

### Chemical and Petroleum Engineering Courses

C&PE 511 Momentum Transfer (3).
C&PE 512 Process Engineering Thermodynamics (3).
C&PE 517 Reservoir Engineering I (4).
C&PE 521 Heat Transfer (3).
C&PE 522 Economic Appraisal of Chemical and Petroleum Projects (2).
C&PE 523 Mass Transfer (4).
C&PE 524 Chemical Engineering Kinetics and Reactor Design (3).
C&PE 527 Reservoir Engineering II (4).
C&PE 528 Well Logging (3).
C&PE 601 Undergraduate Topics in Chemical and Petroleum Engineering (1-4).
C&PE 612 Environmental Assessment of Chemical Processes (3).
C&PE 613 Chemical Engineering Design I (4).
C&PE 614 Reaction Engineering for Environmentally Benign Processes (3).
C&PE 615 Introduction to Process Dynamics and Control (3).
C&PE 616 Chemical Engineering Laboratory I (3).
C&PE 617 Drilling and Well Completion (3).
C&PE 618 Secondary Recovery (4).
C&PE 619 Petroleum Engineering Laboratory I (2).
C&PE 623 Chemical Engineering Design II (2).
C&PE 624 Plant and Environmental Safety (3).
C&PE 626 Chemical Engineering Laboratory II (3).
C&PE 627 Petroleum Production (3).
C&PE 628 Petroleum Engineering Design (3).
C&PE 629 Petroleum Engineering Laboratory II (2).
C&PE 651 Undergraduate Problems (1-6).
C&PE 654 Biocatalysis (3).
C&PE 655 Introduction to Semiconductor Processing (3).
C&PE 656 Introduction to Biomedical Engineering (3).
C&PE 657 Polymer Science and Technology (3).
C&PE 661 Undergraduate Honors Research (3).
C&PE 678 Applied Optimization Methods (3).
C&PE 701 Methods of Chemical and Petroleum Calculations (3).
C&PE 710 Subsurface Methods in Evaluation Formation (3). Study of subsurface methods and their applications to exploration, evaluation, and production of hydrocarbon reservoirs. Emphasis is on fundamentals of quantitative well log interpretations and the use of well log data in solving geologic and reservoir engineering problems, e.g., porosity, hydrocarbon saturation, permeable bed thickness, permeability, correlation, structural mapping, and stratigraphic and paleoenvironmental studies.
C&PE 712 Environmental Assessment of Chemical Processes (3). A discussion and project-based survey of environmental issues in chemical engineering, including environmental consciousness, environmental fate and transport, green chemistry, and life cycle analysis. Focus will be on the design, implementation and management of comprehensive environmental assessments for existing and new industrial facilities with an emphasis on life cycle analysis of the technical and economic impacts of catalytic systems on pollution control strategies. A comprehensive research paper is required as a final project. LEC
C&PE 714 Reaction Engineering for Environmentally Benign Processes (3). Principles of reaction engineering and green chemistry applied to processes of the future. With a case-based introduction to the design and optimization of catalytic processes and reaction systems, focus will be on key reaction engineering concepts, including catalysis, mechanisms, reaction kinetics, heterogeneous reactions, reactor types and economic optimization and will develop a multidisciplinary understanding of chemical, biological and molecular concepts, and will develop and design processes from the micro level to the macro level. A final research paper is required. LEC
C&PE 715 Topics in Chemical and Petroleum Engineering: ______ (1-4). Study in various branches of chemical and Petroleum Engineering on topics that may vary from year to year. IND
C&PE 721 Chemical Engineering Thermodynamics (3). Chemical engineering applications of advanced thermodynamics and physical chemistry. Prerequisite: C&PE 512. LEC
C&PE 722 Kinetics and Catalysis (3). Modeling and analysis of chemical reactors with emphasis on heterogeneous catalytic reaction systems. Prerequisite: C&PE 524. LEC
C&PE 725 Molecular Cell Biology (3). Fundamentals and advanced concepts in cell biology and the molecular interactions responsible for cell functions, homeostasis and disease will be presented. Current analytical methods for examining cell and molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. (Same as PHCH 725) Prerequisite: Graduate standing or consent of instructor. LEC
C&PE 731 Convective Heat and Momentum Transfer (3). The formulation and solution of steady- and unsteady-state convective heat and momentum transfer problems. Applications of boundary layer equations to free and forced convection with study of similarity and integral methods of solution for laminar and turbulent flow; development of analogies; transport properties from kinetic theory of gases viewpoint; introduction to numerical methods. Prerequisite: ME 610/C&PE 511 and ME 612/C&PE 521 or equivalent. A concurrent course in partial differential equations is helpful. LEC
C&PE 732 Advanced Transport Phenomena II (3). The formulation and solution of steady- and unsteady-state mass transfer problems (including those complicated by momentum and heat transfer). This course is the sequel to C&PE 731 and relies upon much of the material treated there. The mathematical approach predominates and the methods available for determining suitable mass transfer coefficients are covered. LEC
C&PE 751 Basic Rheology (3). Basic rheology including classification of classical bodies based on their stress and strain tensors, rheological equation of state, material functions, generalized Newtonian and general viscoelastic fluids, mechanical models such as those of Jeffrey’s and Maxwell. Prerequisite: C&PE 511 or an equivalent course in fluid mechanics. LEC
C&PE 752 Tissue Engineering (3). An introduction to the rapidly growing and continuously evolving field of tissue engineering. Tissue engineering involves the principles and methods of engineering and life sciences toward understanding and development of biological substitutes to restore, maintain and improve tissues functions. In this course, students study the basic science, engineering and medicine required for tissue engineering, learn state-of-the-art technology and practice, and create a feature-based proposal for a tissue engineered medical product. Prerequisite: Senior or graduate standing in engineering; or consent of instructor. LEC
C&PE 753 Introduction to Electrochemical Engineering (3). Basic principles of electrochemical engineering as they are applied to energy conversion and storage devices, industrial electrolytic processes and corrosion. Areas covered range from electrochemical thermodynamics, ionic phase equilibria, electro-kinetics and kinetics mass transport to mathematical modeling of electrochemical systems. Prerequisite: Graduate standing; C&PE 511, C&PE 512, C&PE 524 or equivalent; knowledge of a programming language. LEC
C&PE 754 Biocatalysis (3). Introductory and advanced topics in biocatalysis with focus on enzymatic reactions. Enzymology will provide the fundamental basis for discussion of kinetics and bio-process development. Advanced topics include: enzymes in non-aqueous solvents, immobilization techniques, whole-cell transformations, bio-reactors. Knowledge of the theoretical basis for these techniques and processes will be demonstrated within a class project. LEC
C&PE 755 Introduction to Semiconductor Processing (3). An overview of various processes to fabricate semiconductor devices and integrated circuits. Topics covered include crystal growth, oxidation, solid-state diffusion, ion implantation, photolithography, chemical vapor deposition, epitaxial growth, metallization, and pattern etching of thin films. A term paper on an approved topic of fabrication referencing current peer reviewed literature is required. LEC
C&PE 756 Introduction to Biomedical Engineering (3). The graduate elective form of C&PE 656. Additional assignments commensurate with the graduate-level course designation are required for this section. Prerequisite: Graduate-level standing in Engineering, or consent of instructor. LEC
C&PE 765 Corrosion Engineering (3). Electrochemical basis of corrosion. Types of corrosion and corrosive atmospheres. Corrosion control measures and industrial problems. Prerequisite: ME 30b or CHEM 188. LEC
C&PE 771 Advanced Reservoir Engineering (2-3). Physical principles of petroleum production; gas drive performance; partial water drive performance; pressure maintenance through gas and water injection. Prerequisite: C&PE 527. LEC
C&PE 778 Applied Optimization Methods (3). Study of methods for solving optimization problems encountered in engineering and the natural sciences, with specific analytical and numerical techniques. Topics covered include gradient methods, penalty functions, linear programming, nonlinear and integer programming, stochastic optimization approaches, and treatment of constrained problems. Homework problems involving theoretical concepts and a theoretically-based seminar project are required. LEC
C&PE 790 Introduction to Flow in Porous Media (3). Generalized Darcy’s law, vector equations, solutions of partial differential equations with various boundary conditions, and solution to the Laplace and Poisson equations. Prerequisite: C&PE 511. LEC
C&PE 795 Enhanced Petroleum Recovery (3). A study of improved oil recovery processes such as miscible displacement, microemulsion displacement, and thermal methods. Prerequisite: C&PE 618 or permission of instructor. LEC
C&PE 798 Phase Equilibrium (3). A study of phase behavior and equilibrium from a petroleum engineering prospective. Factors will be on vapor-liquid and solid-liquid equilibrium with advanced topics in compressed and supercritical fluids, petroleum applications, ionic solutions and others. LEC
C&PE 800 Seminar (0.5-1). Every fall, five to six seminar sessions will be devoted to providing incoming students information on available thesis/dissertation research projects, library resources, computing environment and other pertinent in-
Graduate students engage in industrial or research testbeds. Students collaborate in multiscale process development, methods of effectively tapping library resources, preparation of literature surveys, and presentation of results. Faculty members of the department will make presentations of their current research interests. Offered fall only. Corequisite: C&E 800. LEC

C&E 802 Center for Environmentally Beneficial Catalysis Colloquium (0.5-1). A forum in which graduate and postdoctoral students, and faculty present the results of CEBC research and literature surveys that support the mission of CEBC. LEC

C&E 803 Research (1-6). For M.S. candidates. THE

C&E 804 Petroleum Management Seminar (1). Structure, operation, and problems of the petroleum industry from a management viewpoint. Topics include discussion of research methods, methods of effectively tapping library resources, preparation of literature surveys, and presentation of results. Faculty members of the department will make presentations of their current research interests. Offered fall only. Corequisite: C&E 800. LEC

C&E 825 Graduate Problems in Chemical and Petroleum Engineering (1-5). Advanced laboratory problems, special research problems, or library reading problems. Three hours maximum acceptable for master’s degree. RSH

C&E 902 Preparation for the Ph.D. Comprehensive Examination (3). Preparation of a research proposal in an area assigned by the student’s advisory committee. The grade received on the Ph.D. comprehensive examination will apply to this credit. RSH

C&E 909 Research (1-12). For Ph.D. candidates. THE

C&E 910 Industrial Development of Catalytic Processes (3). Students adopt an interdisciplinary team approach to developing strategies for the design and optimization of catalytic processes. Examples of case studies will be developed from industry or from research testbeds. Students collaborate in multiscale process development involving catalyst and reactor design, reaction system design, modeling and optimization, economic analysis and environmental assessment needed for the development of a catalytic process at either the pilot or production scale. LEC

C&E 911 Industrial Practicum (1-3). Graduate students engage in an industrial research internship experience with collaborators in industry. LEC

C&E 912 Teaching College-Level Engineering and Science Practicum (1). Future university instructors learn how to critically examine course content and teaching strategies, and prepare courses that will address the learning needs of the diverse student populations of the future. Students participate in weekly in-class workshops and symposia, as well as a teaching practicum experience during this course. LEC

C&E 919 Advanced Topics in Process Modeling Simulation or Control: ____ (1-4). Advanced study in process modeling, simulation or control on topics which may vary from year to year. LEC

C&E 929 Advanced Topics in Chemical and Petroleum Engineering: ____ (1-4). Advanced study in various branches of chemical and petroleum engineering on topics which may vary from year to year. LEC

C&E 933 Heat and Mass Transport in Porous Media (3). A study of industrial problems involving heat and mass transport in porous media such as packed columns, catalyst beds, chemical reactors, and petroleum reservoirs. Mechanisms of interphase and intraphase transport, diffusion, and dispersion. Included are methods are solutions of differential equations. LEC

C&E 934 Heat Transport with Phase Change (3). A fundamental treatment of heat transfer occurring during boiling and condensation. Included are nucleate and film boiling, film and dropwise condensation, and two-phase flow. LEC

C&E 936 Industrial Separation Processes (3). Determination and treatment of vapor-liquid separations, including methods for obtaining and treating equilibrium data, procedures for calculating multi-component separations by distillation, absorption, extraction, and adsorption. LEC

C&E 937 Applied Rheology (3). Industrial applications of fluid mechanics including compressible flow, flow of non-Newtonian fluids, flow of drag reducing systems all to be considered in laminar and turbulent flow regimes, and within conduits, and porous media. LEC

C&E 939 Advanced Topics in the Transport Phenomena: ____ (1-4). Advanced study in various branches of transport phenomena on topics which may vary from year to year. LEC

C&E 940 Data Analysis in Engineering and Natural Sciences (3). Statistical inference and data analysis, emphasizing interpretation of observations from areas of engineering and natural sciences where controlled experimentation is not possible. The basics of elementary statistics and matrix algebra are covered, followed by topics in time, series analysis, map analysis, including automatic contouring, and multivariate procedures such as principal components, discrimination and factor analysis. A suite of computer programs is provided. Students are encouraged to use data from their own graduate research in class projects. LEC

C&E 980 Introduction to Research (1). One hour per week in which the staff introduces entering graduate students to research. Topics include discussion of research methods, methods of effectively tapping library resources, preparation of literature surveys, and presentation of results. Faculty members of the department will make presentations of their current research interests. Offered fall only. Corequisite: C&E 800. LEC

Degree Programs and Admission

The department offers graduate programs leading to the following degrees:
- Master of Science in Architectural Engineering
- Master of Science in Civil Engineering
- Master of Science in Environmental Engineering
- Master of Science in Environmental Science
- Master of Civil Engineering
- Master of Construction Management
- Doctor of Philosophy in Environmental Engineering
- Doctor of Philosophy in Environmental Science
- Doctor of Philosophy in Civil Engineering
- Doctor of Engineering in Civil Engineering

The Master of Science degrees in civil, environmental, and architectural engineering and the Master of Civil Engineering degree require ABET-accredited baccalaureate degrees in engineering.

The Master of Civil Engineering degree provides an option for working professionals who do not need the research component of the M.S. degrees. This degree requires two courses in engineering management to complement the technical engineering graduate courses.

The interdisciplinary Master of Science degree in environmental science is intended primarily for students with baccalaureate degrees in fields other than engineering.

The Master of Construction Management is a professional degree intended primarily for part-time graduate students employed in the construction industry. Most students in this program have baccalaureate degrees in fields other than engineering.

The department’s doctoral degrees are the research-oriented Doctor of Philosophy degrees in civil engineering, environmental engineering, and environmental science, and the practice-oriented Doctor of Engineering degree in civil engineering.

Graduate students in the engineering degree programs can specialize in structural engineering, environmental engineering, water resources engineering, geotechnical engineering, transportation engineering, construction engineering mechanics, building mechanical systems, or energy management. Many of the department’s civil engineering graduate courses are taught in the evening on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area. Graduate courses in construction management are taught in the evening on the Lawrence campus.

The department admits for all semesters. Students may pursue degrees full or part time. Applicants with baccalaureate degrees in engineering are expected to have undergraduate grade-point averages of 3.0 or higher on a 4.0 scale for regular admission to a master’s program. An undergraduate grade-point average of 3.3 or higher is expected for applicants with baccalaureate degrees in other fields. Applicants with slightly lower
The Radar Systems and Remote Sensing Laboratory conducts research in radar and other electromagnetic sensing problems, including advanced system concepts, radar image formation, adaptive radar signal processing, and radar simulation.

Radar systems engineering emphasizes microwaves (including millimeter waves), signal analysis, remote-sensing/surveillance systems, and electromagnetics.
The architectural engineering program is offered in cooperation with the School of Architecture, Design and Planning.

Many civil engineering graduate courses are taught in the evening on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area.

The architectural engineering program is offered in cooperation with the School of Architecture, Design and Planning.

Many civil engineering graduate courses are taught in the evening on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area.

The architectural engineering program is offered in cooperation with the School of Architecture, Design and Planning.

Many civil engineering graduate courses are taught in the evening on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area.
plied to various environmental physical processes. Prerequisite: CE 477 or equivalen-
test, calculating efficiency of physics.

CE 773 Biological Principles of Environmental Engineering (3). A basic study of the mi-
croorganisms of importance in environmental engineering. Emphasis is placed on the
microbiology of dilute nutrient solutions. Microbial physiology, microbial ecology, and
biochemical processes are covered as they pertain to the selection and combination of
biodegradation and public health aspects are included. (Two lectures and one
three-hour laboratory per week.) May not be taken for credit by students with credit in
CE 577. Prerequisite: CE 477 or equivalent, calculus, and five hours of chemistry. LEC

CE 774 Chemical Principles of Environmental Engineering Processes (3). Chemical prin-
ciples of stoichiometry, thermodynamics, and kinetics are applied to various chemical
processes having application in the field of environmental engineering and science,
including adsorption, ion exchange, coagulation, oxidation, and precipitation. Prerequi-
site: CE 477 or equivalent, calculus, and credit or registration in CE 570 or CE 770. LEC

CE 775 Marine Pollution (3). Marine chemistry and relation to pollution problems.
Types of pollution and effects on the environment. Interrelation of the chemical,
physical, geological, and biological parameters of the ocean and their interaction with
pollutants. Emphasis is given to application of these concepts to environmental engineering and
ecological cooperation, and economics. Offered irregularly. Prerequisite: Senior or
graduate standing and consent of instructor. Minimum of at least seven hours of
chemistry and eight hours of physics. LEC

CE 777 Industrial Water and Wastes (3). A review of the methods of industrial
water treatment and the fundamentals of industrial wastewater pollution control.
Topics include: water budgets, cooling tower and boiler treatment, corrosion con-
trol, government regulations, wastewater characterization, waste minimization,
pilot plant-scale industrial treatment, and related pollution control. May not be taken
for credit by students with credit in CE 577. Prerequisite: CE 477 or equivalent. LEC

CE 778 Air Quality (3). The course is intended to provide a working knowledge of pollu-
tant sources, effects, meteorological factors, measurements, modeling approaches, legis-
atution and related air quality regulations. The goal is to help students develop
the integrated planning and control of point and nonpoint sources of pollution.
Prerequisite: MATH 111 or MATH 121. LEC

CE 779 Water Quality (3). Examination of water quality principles, pol-
cy, procedures, and processes. Regular and irregular pollution regulations are
related to the integrated planning and control of point and nonpoint sources of pollution.
Prerequisite: MATH 121 or equivalent, CE 477, and CE 570 or CE 770. LEC

CE 781 Traffic Engineering Characteristics (3). A study of fundamental traits and
behaviors of the user and highway environment in traffic engineering. The major con-
tent involves techniques for obtaining data, analyzing data and interpreting data on
traffic speed, volume, streamflow, parking and accidents. Capacity analyses
using the most up to date procedures for major traffic facilities such as undivided
highways, city streets, freeways, and interchanges and intersections are also discussed
at length. Prerequisite: CE 582 or equivalent. LEC

CE 782 Public Works Engineering (3). The functions of a public works director are
presented. Topics discussed are concerns with the environment, solid waste, traf-
lic drainage, maintenance of facilities, personnel, etc. LEC

CE 783 Railroad Engineering (3). A comprehensive study of the railroad industry,
including the development of the railway system, an overview of the railroad ind-
ustry, basic track work, right-of-way and roadway concerns, drainage, track de-
sign, railroad structures, electrification and rail passenger service. A final design
project is required. Prerequisite: CE 240, CE 582 or equivalent. LEC

CE 784 Airport Planning and Design (3). A comprehensive study of the planning
functions and operations of airports. Both ground side and air side capacity and de-
sign elements will be presented. Other topics covered are airport master planning,
air traffic control, pavement design, terminal design, and environmental impacts of air-
ports. Prerequisite: CE 240 or equivalent. LEC

CE 785 Terrain Analysis (3). A study of the applications of the science of aerial-
photographic interpretation as it pertains to the field of civil engineering includ-
ing the recognition of soil types and classes, engineering materials surveys, route
location, and the delineation of watersheds and estimates of runoff there from. Prerequ-
isite: CE 487 or equivalent. LEC

CE 786 Highway Safety (3). Several topics dealing with highway safety are presented and
discussed, including: traffic volumes and density, highway accidents, driver behav-
ior, accident prediction, driver testing, the effects of alcohol, crashes, and accident
rates. LEC

CE 787 Advanced Soil Mechanics (3). Three lecture periods. A study of the
behavior of soils and clay under load in the linear and nonlinear range of response. Topics
covered include: stress-strain behavior of concrete under multi axial states of stress; moment-curvature analysis; ad-
verse conditions; failure and settlement of reinforced concrete; behavior of reinforced concrete in bending; and
analysis of solids. Prerequisite: CE 761 or equivalent. LEC

CE 788 Geotechnical Engineering Testing (3). Three lectures. Field testing tech-
niques, sampling methods, and laboratory testing procedures used to determine soil
properties for engineering projects. Prerequisite: CE 687. LAB

CE 789 Pavement Management Systems (3). Basic components of pavement
management systems. Emphasis is given to pavement evaluation, planning pave-
ment investment, rehabilitation design alternatives, and pavement management
program implementation. Prerequisite: CE 487, CE 484 or equivalent. LEC

CE 791 Water Quality, Fate, and Treatment Design (3). A review of current site characteriza-
tion and design methods for solid and hazardous waste facilities with particular
emphasis on working within the modern regulatory environment. Prerequisite:
CE 487 or equivalent. LEC

CE 792 Knowledge-Based/Expert Systems in Engineering (3). Introduction to the
use of knowledge-based systems for engineering problem solving. These systems
have a separation between the facts and concepts (the knowledge base) and the
reasoning process used to draw conclusions (the inference mechanism). A wide
variety of applications are addressed including civil, chemical and petroleum,
computer, and aerospace engineering. Prerequisite: Computer literacy, bachelor’s degree in engineering.

CE 793 Advanced Concepts in CAD (3). Advanced concepts related to the application
of computer aided design and drafting to the practice of civil engineering are presented.
This includes: developing macros, understanding CAD programming languages, and
modifying existing programs. Prerequisite: Consent of instructor. Introduction to Geographical Information Systems (GIS) will be presented. Prerequisite: Working knowledge of one computer aided design graphics software package. LEC

CE 794 Environmental Graduate Student Orientation (1). An introductory gradu-
ate orientation course with a research emphasis. Includes a review of these topics:
special project report, technical reports, oral presentations, papers, and grant prop-
sals. This course will also provide orientation information for new students and
advice on preparing a plan of study. LEC

CE 795 Scanning Electron Microscopy and X-Ray Microanalysis (3). The course covers
elemental analysis, electron beam-sputtering, electron microprobe analysis, electron image formation, x-ray spectral
measurement, qualitative and quantitative x-ray microanalysis, practical techniques of x-ray analysis and specimen preparation techniques. Emphasis is placed on materials, but most techniques apply to biological specimens as well. Prerequisites: PBSD 212, LEC

CE 800 Theory of Elasticity (3). The basic equations of the theory of elasticity;
stress and strain transformation, strain-displacement, compatibility and stress-
strain relations. Formulation of problems and exact solutions. Introduction to ap-
proximation solution methods based on energy methods and finite elements. LEC

CE 801 Energy Methods (3). The methods of analysis by energy methods of me-
chanics problems. Includes variational energy principles, calculus of variations,
stationary energy and complementary energy principles, and the principle of vir-
tal work. Application: PSE 310 and MATH 320. LEC

CE 802 Nondestructive Evaluation of Materials and Structures (3). This course cov-
ers nondestructive methods and their application to engineered structures and
components. Methods covered include: ultrasonic testing, acoustic emission, vi-
ation, impact-echo, visual inspection, and frequency response. LEC

CE 810 Theory of Elastic Stability (3). Buckling of columns in the elastic or hyper-
elastic region. Lateral and torsional buckling of straight and curved members.
Buckling of plates and shells. LEC

CE 848 Pavement Materials Characterization (3). Laboratory and field test meth-
ods relating to evaluation of engineering properties of mix design methods and the relationship between mix design and pavement structural design and performance. Prerequisite: CE 484 or consent of instructor. LEC

CE 855 Free Surface Flow II (3). Continuation of CE 755 with concentration on computer modeling of open channel flow using HEC-RAS, WSPRO, and other general purpose analysis. Analysis of bridge scour using FHWA methods is also considered. Prerequisite: CE 755. LEC

CE 856 Wetland Design, Engineering, and Management (3). Introduction of de-
sign concepts in creating and restoring wetland systems. Review of wetland hy-
drology and hydraulics. Interaction of wetland hydrology, soils, and vegetation
providing environmental benefits. Considerations in project planning, site selec-
tion and preparation, construction and operation, and maintenance. Use of state
and local legal and management tools to protect and restore wetlands. Emerging con-
munity planning and mitigation. Prerequisite: CE 756. LEC

CE 857 Sediment Transport (3). A study of the transport of sediment in alluvial
channels. Specific topics include properties of sediment, mechanics of bed forms,
particle entrainment, scour analysis, prediction of suspended load and bed load,
distances and stable channels and bed forms. Analysis of sedimentation of reservoirs.
Prerequisite: CE 755 or consent of instructor. LEC

CE 858 Urban Hydrology and Stormwater Management (3). Hydrology of urban wa-
tersheds; floodplain management; hydrologic modeling; storm drainage; stormwater
design; water quality improvement; geomorphology of urban streams; stream cor-
rider management and stream restoration. Prerequisite: CE 751. LEC

CE 861 Finite Element Methods for Solid Mechanics (3). Stress analysis of 2-D and
3-D solids, plates, and shells by the finite element method. Element formula-
tions and behavior with emphasis on the isoparametric concept. Computer model-
ing and interpretation of results. Introduction to material and geometric nonlinear
analysis of solids. Prerequisite: CE 761 or equivalent. LEC

CE 862 Behavior of Reinforced Concrete Members (3). This mechanics course covers
in detail the constitutive behavior of reinforced concrete members subjected to various
types of loading and presents the basis for modeling the response of reinforced concrete
structures in the nonlinear range of response. Topics covered include: stress-strain
behavior of concrete under multi axial states of stress; moment-curvature analysis; ad-
verse conditions; failure and settlement of reinforced concrete; behavior of reinforced concrete in bending; and
analysis of solids. Prerequisite: CE 761 or equivalent. LEC

CE 864 Seismic Performance of Structures (3). This course builds on topics from
structural dynamics to introduce principles of structural performance during earth-
quake events. Emphasis is placed on estimating the response of building structures as
represented by simple and complex models. Topics covered include strong ground
motion characterization and simulations, time history and modal analysis of simple systems and building systems, and performance-based earthquake engineering. Prerequisite: CE 704. LEC

CE 865 Structural Design for Dynamic Loads (3). The behavior and design of
structural systems subjected to dynamic forces such as blasts, earthquakes, and
wind loads. Prerequisite: CE 761. LEC

CE 869 Plates and Shells (3). The analysis and design of plates and shells including
thin and thick plates, membrane theory of shells and bending theories of shells. LEC

CE 871 Fundamentals of Bioremediation (3). A study of microbial ecology and physi-
ology as they relate to the degradation of environmental contaminants. Emphasis is
placed on the interrelationship between the physiological traits or microorganisms, and the physical and chemical properties of the contaminants and the treatment environments. Case studies involving in-situ bioremediation and reactor design are discussed. Prerequisite: CE 573 or CE 773 or equivalent, and five hours of chemistry. LEC

CE 873 Environmental Monitoring (2). A lecture-laboratory course to familiarize students with the techniques of monitoring, data interpretation, and system design. Prerequisites: CE 774 or equivalent. LEC

CE 874 Advanced Pollution Control (3). The design of control devices for the abatement of air pollutants, both gaseous and particulate, emitted from stationary sources. This includes the basic theory of control device operation and economic factors associated with each type of control device design. Prerequisite: CE 772 and CE 778 or equivalent. LEC

CE 875 Solid and Hazardous Wastes (3). Fundamental issues associated with solid and hazardous wastes are presented. Topics include government regulations, waste characteristics and quantities, the transport and attenuation of wastes in the environment, risk assessment, and handling, treatment and disposal techniques. Special emphasis is placed on hazardous wastes, waste remediation strategies in terrestrial systems. Prerequisite: Graduate standing in the Environmental Science and Engineering program, or consent of instructor. CE 770 and CE 773 are recommended. LEC

CE 876 Wastewater Treatment Plant Design (3). Application of physical, chemical, and biological principles to the design of wastewater treatment systems for domestic and other wastewaters. Special emphasis is placed on biological treatment processes. Prerequisite: CE 576 or equivalent, or CE 573 or CE 773 or equivalent. LEC

CE 877 Water Treatment Plant Design (3). Application of physical, chemical, and biological principles to the design of water treatment plants and processes, domestic water supply from surface and ground water sources. Prerequisite: CE 774, or concurrent enrollment. LEC

CE 878 Air Quality Modeling (3). Fundamental physical and mathematical principles applied to air quality modeling; considered are factors that influence the choice and application of each, as well as the interpretation of model output data. Practical applications are stressed using standard models. Prerequisite: CE 778 or equivalent and MATH 121 or CE 625. LEC

CE 879 Environmental Research Seminar (1). Discussion of current topics in environmental engineering and science and related fields by staff, students, and visiting lecturers. May be taken only once for credit. LEC

CE 881 Traffic Engineering Operations (3). A study of theory and practical applications of a number of traffic operational and management tools to achieve the efficiency and safety of movement of people and goods in urban street networks. The major content involves signalized intersection capacity, design and operation; signalized intersection coordination; and modern roundabout design. Prerequisite: CE 852 or equivalent. LEC

CE 882 Geometric Design of Traffic Facilities (3). A study of basic principles in the design of freeways, urban street systems, parking terminal and other traffic facilities with emphasis on capacity, safety, level of service, and dynamic design concept. Prerequisite: CE 781 or equivalent. LEC

CE 883 Urban Transportation Planning (3). A detailed study of the comprehensive transportation planning process which includes the determination of urban travel characteristics and needs from studies of traffic, social-economical, and environmental factors, as well as the applications of land use, trip generation, trip distribution, modal split, and traffic assignment models. Prerequisite: CE 781 or equivalent. LEC

CE 884 Principles of Pavement Design (3). A study of the scientific principles of pavement design as applied to airfield and highway pavements, considering loading conditions, stress distribution, and the properties of the various pavement components, focusing on rigid pavements. Prerequisite: CE 487 or equivalent. LEC

CE 885 Advanced Foundation Engineering (3). A study in the design, construction, and behavior of footings and rafts, piles and drilled shafts founded on soils and rocks. Prerequisite: CE 588 or equivalent. LEC

CE 886 Engineering Rock Mechanics (3). Rock properties and behavior; theories of failure of brittle, jointed, and anisotropic rocks; rock support; laboratory and in-situ testing techniques. Prerequisite: A course in physical geology and CE 487 or equivalent. LEC

CE 887 Earth Structures (3). Current theory and practice relating to the design of retaining walls, earth slopes, large embankments, and landslide mitigation. Application of geotechnics to the design of earth retaining structures and slope stabilization. Prerequisite: CE 588 or consent of instructor. LEC

CE 888 Ground Improvement (3). Basic descriptions, classification, principles, advantages, and limitations of ground improvement techniques. Design, construction, and quality assurance for control of ground improvement techniques. Prerequisite: CE 588 or equivalent. LEC

CE 889 Designing with Geosynthetics (3). Basic design and properties of geosynthetics including geotextiles, geogrids, geomembranes, geos, geocomposites, and geosynthetic clay liners. Geosynthetic functions and mechanisms including separation, drainage, containment. Design with geosynthetics for roadways, embankments/slopes, earth retaining structures, and landfills. Prerequisite: CE 588 or equivalent. LEC

CE 890 Advanced Special Problems (1-5). A directed study of a particular problem in the area of civil engineering or allied field. This course is for graduate students only. RSH

CE 892 Structural Engineering and Mechanics Seminar (1). Presentation and discussion of current research and design in structural engineering and engineering mechanics. LEC

CE 895 Special Topics:... (1-3). A course or colloquium to present topics of special interest. Prerequisite: Varies by topic. LEC

CE 899 Thesis (1-10). An original research or design problem to be presented as a part of the program for the degree of master of science. THE

CE 902 Advanced Vibrations (3). Vibrations of mechanical systems and structures. Nonlinear vibrations. Random vibration. Prerequisite: CE 704 or AE 704. LEC

CE 912 Theory of Plasticity (3). Plastic stress-strain relationships. Stress and deformation in thick-walled shells, rotating discs, and bars subjected to torsion and bending. Viscoelastically plastic materials. Plastic bending of beams, strain and deformation, general physical principles for the continuum, and various constitutive equations. LEC

CE 913 Advanced Fracture Mechanics (3). Development of Griffith-Irwin crack theory and plane strain-stress intensity factors. Advanced analytical and experimental aspects of fracture and fatigue. Development of fracture control plans. Prerequisite: CE 767 or consent of instructor. LEC

CE 927 Advanced Mechanics (3). The mechanics of continuous media. A unified treatment of the fundamental principles and theories governing applications in solid and fluid mechanics. Topics include the development of strain, stress and deformation, general physical principles for the continuum, and various constitutive equations. LEC

CE 929 Advanced Topics in Solid Mechanics (2-4). Topics such as thermal stresses, vibrations in elastic continuum, dynamic instability, and other advanced topics. LEC

CE 961 Finite Element Methods for Nonlinear and Dynamic Systems (3). Advanced treatment of finite element techniques for structural analysis including material and geometric non-linearity and the solution of large scale dynamics problems. Prerequisite: CE 861 or ME 761 or equivalent. LEC

CE 983 Implementation of the Urban Transportation Planning System—UTPS (3). A study of the principles and implementation skills of the most up-to-date versions of several urban transportation planning software packages. The course involves a two-hour lecture and a three-hour laboratory period. Prerequisite: CE 883, or UBLI 780, or equivalent. LEC

CE 991 Research (1-15). An investigation of a special problem directly related to civil engineering. RSH


I Construction Management Courses

CMGT 500 Construction Engineering (3). LEC

CMGT 609 International Construction Management (3). LEC

CMGT 700 Construction Project Management (3). LEC

CMGT 701 Construction Planning and Scheduling (3). LEC

CMGT 702 Construction Equipment and Methods (3). LEC

CMGT 703 Construction Quality, Productivity, and Safety (3). LEC

CMGT 704 Construction Estimating and Bidding (3). LEC

CMGT 705 Construction Contracts, Bonds, and Insurance (3). LEC

CMGT 708 Introduction to Sustainable Design and Construction (3). LEC

CMGT 790 Construction Seminar: (3). Prerequisite: Varies with topic. LEC

CMGT 801 Directed Readings in Construction Management (1-3). Graduate-level directed readings on a topic of special interest. Prerequisite: Enrollment by the student and instructor. Intended to build on one or more of the core course topics: project management; planning and scheduling; equipment and methods; dispute resolution; and the economic feasibility of construction projects. Prerequisite: CMGT 400 or CMGT 790, MATH 526 or CMGT 802, and ARCE 357 or CMGT 802. LEC

CMGT 802 Special Problems in Construction Management (1-3). Graduate-level investigation requiring research of a topic in construction management mutually agreed on by the student and instructor. Intended to build on one or more of the core course topics: project management; planning and scheduling; equipment and methods; dispute resolution; and the economic feasibility of construction projects. Prerequisite: CMGT 400 or CMGT 790, MATH 526 or CMGT 802, and ARCE 357 or CMGT 802. LEC
methods; quality, productivity and safety; estimating and bidding; contracts, bonds, and insurance. CMGT 802 may be repeated for credit to a maximum of three hours in the degree program. Mutually agreed course deliverable such as a paper summarizing the results of the investigation required. Prerequisite: Approval of the course topic and deliverable by the instructor. CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, and CMGT 705. IND

CMGT 805 Construction Accounting and Finance (3). Project level cost control concepts and structure, time and cost integration, data collection and reporting, equipment cost, job overhead cost, and cost control. Integrating construction project level cost with construction company financial accounting and financial management. Prerequisite: CMGT 702 and CMGT 704 or consent of instructor. LEC

CMGT 890 Construction Seminar (3). Prerequisite: Varies with topic. LEC

CMGT 895 Construction Management Project (1-3). Graduate-level investigation and report on a construction management topic mutually agreed on by the student and project advisor. This is the capstone course in the Master of Construction Management (M.C.M.) degree program. Successful completion of this project requires acceptance of the written report and oral presentation to the student's graduate committee. Prerequisite: Approval of project topic by project advisor. CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, CMGT 705, and nine elective credit hours. IND

Electrical Engineering and Computer Science

Chair: Glenn Prescott
Eaton Hall, 1520 W. 15th St., Suite 2001G
Lawrence, KS 66045-7605, www.eecs.ku.edu
(785) 864-4620; fax: (785) 864-3226
Graduate Studies Director: Man Kong, 2001F Eaton Hall,
(785) 864-7389

Associate Professors: Brown, Chakrabarti, Chen, Kinnersley, Kong, Miller, Niehaus, Sterbenz, Stiles
Associate Professor Emeritus: Doemland
Assistant Professors: Blunt, Ercal-Ozkaya, Gill, Luo, Potetz, Seguin, Huan, Kulkarni, Leuschen, Perrins, Zhang
Research Assistant Professors: Deavours, Harris, Rodriguez-Morales

The department offers M.S. degrees in electrical engineering, computer engineering, and computer science; Ph.D. degrees in electrical engineering and computer science; and D.E. degrees in electrical engineering. The department also offers M.S. programs in computer science and information technology at the KU Edwards Campus in the Kansas City area.

The department has focus areas in bioinformatics, communication systems and networking, computer systems design, interactive intelligent systems, and radar systems and remote sensing. Class lists and teaching schedules are available in the graduate office or on the Web site. Other plans of study can be constructed, in conjunction with a faculty advisor, to fit individual student needs.

Admission

Admission is open to college and university graduates whose previous records indicate an ability to succeed with graduate work in the chosen discipline.

An applicant for the M.S. program in electrical engineering or in computer engineering normally has a baccalaureate degree in electrical or computer engineering. An applicant for the M.S. program in computer science normally has a baccalaureate degree in computer science. However, a student with good preparation in some other field of engineering, mathematics, business, or science may qualify for one of the programs by taking appropriate additional undergraduate courses. Such courses normally do not count toward the graduate degree.

Lists of specific prerequisite courses for each M.S. program are available in the graduate office or on the department Web site.

An applicant for the Ph.D. or D.E. program in electrical engineering normally has an M.S. in electrical or computer engineering. An applicant for the Ph.D. in computer science normally has an M.S. in computer science or computer engineering. Applicants with strong academic credentials may be admitted directly into one of the Ph.D. programs or the D.E. program without an M.S. in the requisite field.

Applicants must demonstrate evidence of aptitude for graduate work, as shown by suitable performance in undergraduate and any graduate course work, by aptitude test scores on the Graduate Record Examination, and by academic letters of reference.

Unless the applicant's native language is English or the applicant has received a baccalaureate degree or higher from an accredited U.S. institution of higher education, he or she must meet the department's standard for the Test of English as a Foreign Language, which is higher than the general KU requirement. Applicants for graduate teaching assistantships must earn satisfactory scores on the Test of Spoken English.

The application deadline for fall admission is March 1. For full consideration for fellowships and assistantships, applications should be submitted by January 1. The deadline for spring admission is October 1. See www.graduate.ku.edu for application fees.

Send all other requested application materials to

The University of Kansas
Department of Electrical Engineering and Computer Science, Graduate Office
Eaton Hall, 1520 W. 15th St., Suite 2001E
Lawrence, KS 66045-7605

M.S. Degree Requirements

The M.S. degree programs in electrical engineering, computer engineering, computer science, and information technology offer thesis and nonthesis options. The thesis option requires a minimum of 30 credit hours of approved graduate course work. A master's thesis should address an open problem in EECS. After evaluating current literature related to the problem of interest, students must design, build, and evaluate hardware or software systems or system models to prove or disprove their research hypothesis. Completing a thesis typically takes two semesters and produces results that could be published as a paper in conference proceedings or a pro-

The Center for Remote Sensing of Ice Sheets is a Science and Technology Center established by the National Science Foundation in 2005. CReSIS develops new technologies and computer models to measure and predict the response of sea level change to the mass balance of ice sheets in Greenland and Antarctica.
All plans of study must include at least one semester of EECS 802 EECS Colloquium. May be counted toward the 30 hours required for the degree. Department and a maximum of 6 hours numbered below 700. Master's Thesis or Report. A maximum of 9 hours outside the department and a maximum of 15 credit hours of EECS classes numbered 700 or higher, excluding EECS 801 Directed Graduate Readings, EECS 891 Graduate Problems, and EECS 899 Master's Thesis or Report. Students who choose the nonthesis option must demonstrate their understanding of their discipline to the associate chair for graduate studies during an oral examination scheduled in the last semester.

Doctoral Degree Requirements
Requirements for the doctoral degree programs include a written doctoral qualifying examination, course work, a research skills requirement, a comprehensive oral examination, a dissertation, and a final oral examination. Doctoral students also must take at least one semester of EECS 802 EECS Colloquium.

In the first semester, the student must select a major adviser and a committee on studies. This committee guides the student’s selection of courses, participates in the comprehensive and final examinations, and helps the student select a topic for research leading to the dissertation. Should the student’s interests change, the committee membership may be changed accordingly, with the approval of the department’s graduate studies committee.

The student’s committee consists of a minimum of five Graduate Faculty members and is chaired by the major adviser. The adviser and at least two other members of the committee must be members of the department Graduate Faculty. One committee member must be from outside the KU department in the university.

Each doctoral student must pass a doctoral qualifying examination. This is a written examination taken within a single day that measures the student’s ability to comprehend and interpret technical literature in an unfamiliar topical area of the discipline. The examination is offered once a year, in the spring semester, and the student must take it at the first opportunity after completing the M.S. or after initial enrollment in the doctoral program. It may be retaken once, in the following spring semester. A more detailed description of the examination, including samples, is available in the graduate office.

Programs leading to the Ph.D. in electrical engineering or computer science require a minimum of 18 semester credit hours of course work beyond the requirements for the M.S. degree and a minimum of 18 credit hours of dissertation research. A minimum of 15 of these 18 hours must be EECS classes numbered 700 and above, excluding EECS 801 Directed Graduate Reading and EECS 891 Graduate Problems.

Students admitted to a doctoral program without an M.S. in the intended field also must meet the 24-hour course work requirement for the M.S. thesis option, for a total of 42 credit hours of course work. In this case, 30 of the 42 hours must be EECS classes numbered 700 and above, excluding EECS 801 Directed Graduate Reading and EECS 891 Graduate Problems.

For the D.E., at least 96 hours of graduate course work, specified by the committee, are required. These include approved master’s course work in the discipline, 30 hours of doctoral project work, and 12 to 18 hours of industrial internship. Deviations from this requirement can be approved by the graduate studies committee.

Waiver of required hours on the basis of graduate work done elsewhere may be allowed by petition to the graduate studies committee.

After passing the qualifying examination, each aspirant to the Ph.D. or D.E. degree must complete one of the following research skill requirements before being permitted to take the comprehensive examination. Selection of a particular require-

Researchers at KU's Information and Telecommunication Technology Center specialize in bioinformatics, information systems, telecommunications, radar systems, and remote sensing.

Courses with a _____ at the end of their titles are typically topics or seminar courses that may be repeated for credit. Usually these courses offer different topics each time they are taught. Check with the course instructor about requirements and topics.
ment must be approved by the student’s committee. Selection of a nonstandard skill must also be approved by the graduate studies committee. The options are:

- Demonstration of a reading knowledge of one modern foreign language in which a substantial research literature relevant to the thesis or general degree area exists.
- Demonstration of proficiency in the use of computers to solve real science and engineering problems. The student must write, debug, and document a program to solve a relevant problem.
- Nonstandard skill: Demonstration of any other research skill that is acceptable to the graduate studies committee.

The student must take the doctoral comprehensive examination after passing the qualifying examination, completing the research skills requirement, and completing at least three-fourths of the course work requirement beyond the M.S. The student must complete the comprehensive examination before detailed work on the Ph.D. dissertation or D.E. project begins. Before the examination, the student must submit in writing to the committee a detailed proposal for a possible Ph.D. dissertation or D.E. project. In the comprehensive examination, the student is examined upon the proposal and on knowledge and insight in the specialization, and a dissertation committee is formed.

The examining committee for the comprehensive examination consists of five or more members of the Graduate Faculty, at least one of whom must be from outside the department in the university and at least three of whom are in the department. It normally includes the student’s committee on studies. If the student passes the comprehensive examination and later chooses another substantially different topic for the dissertation, a new proposal must be presented in writing and orally for the approval of the committee on studies.

Following completion of the Ph.D. dissertation or D.E. project report, the candidate must defend the dissertation or project report in an oral final examination. The examining committee is once again constituted as in the comprehensive oral examination.

### Electrical Engineering and Computer Science Courses

**EECS 501** Senior Design Laboratory I (3).

**EECS 502** Senior Design Laboratory II (3).

**EECS 510** Introduction to the Theory of Computing (3).

**EECS 512** Electronic Circuits III (3).

**EECS 541** Computer Systems Design Laboratory I (3).

**EECS 542** Computer Systems Design Laboratory II (3).

**EECS 546** Integrated Circuit Design (3).

**EECS 560** Data Structures (4).

**EECS 562** Introduction to Communication Systems (4).

**EECS 563** Introduction to Communication Networks (3).

**EECS 580** Electrical Power Systems (3).

**EECS 611** Electromagnetic Compatibility (3).

**EECS 622** Microwave and Radio Transmission Systems (3).

**EECS 628** Fiber-Optic Communication Systems (3).

**EECS 638** Fundamentals of Expert Systems (3).

**EECS 643** Advanced Computer Organization (3).

**EECS 644** Introduction to Digital Signal Processing (3).

**EECS 645** Computer Architecture (3).

**EECS 647** Introduction to Database Systems (3).

**EECS 648** Software Engineering Tools (3).

**EECS 649** Introduction to Artificial Intelligence (3).

**EECS 660** Fundamentals of Computer Algorithms (3).

**EECS 662** Programming Languages (3).

**EECS 665** Compiler Construction (4).

**EECS 670** Introduction to Semiconductor Processing (3).

**EECS 672** Introduction to Computer Graphics (3).

**EECS 678** Introduction to Operating Systems (4).

**EECS 690** Special Topics: (1-3).

**EECS 692** Directed Reading (1-3).

**EECS 700** Special Topics: (1-5). Courses on special topics of current interest in electrical engineering, computer engineering, or computer science, given when the need arises. May be repeated for additional credit. Prerequisite: Variable. LEC

**EECS 701** Programming and Data Structures (3). Introduction to programming and algorithm development, classes and objects, various control structures, modular programming, function and procedures, recursive function, data structures, abstract data types, arrays, dynamic memory allocation, sorting and searching structures, linked lists, stacks, queues, trees, time and space complexities, elementary algorithm analysis. This course will not count toward any EECS degree. Prerequisite: Admitted to an EECS M.S. program. LEC

**EECS 702** Computer Organization and Operating Systems (3). Introduction to the study of computer construction—voltage levels, internal processing, and CPU and output peripherals, memory unit, digital information representation, assembly language programming, register machines, microprogramming, language processors; basic concepts of operating systems and system programming; processes and interprocess communication, memory management, virtual memory, program loading and linking, file and I/O subsystems; Unix operating system. This course will not count toward any EECS degree. Prerequisite: EECS 701. LEC

**EECS 710** Information Security and Assurance (3). Identifying critical information assets; information security; integrity, and availability; security risks and risk avoidance; security models; access control mechanisms; computer viruses, worms, Trojan horses and other malicious login; encryption, cryptography, and key management technologies; operating systems security; database security; network security; social policies; management and auditing. Prerequisite: Graduate standing in EECS. LEC

**EECS 711** Security Management and Audit (3). Administration and management of security of information systems and networks, intrusion detection systems, vulnerabilities; network administration, computer forensics, malicious code, authentication, and risk management, contingency planning and incident handling, security planning, e-business and commerce security, privacy, traceability and cyber-evidence, legal issues in computer security. Prerequisite: EECS 710. LEC

**EECS 712** Network Security (3). Introduction to the basic concepts, components, protocols, and software tools to achieve secure communication in a public network. The concept of encryption, integrity, authentication, security models, and the robustness analysis. Emphasis on the application level protocols and vulnerabilities: firewalls, viruses, worm attack, Trojan horses, password, secure communications, security multilateral biometrics, VPs, internet protocols such as SSL, IPSec, PGP, and SNMP. The policies for access control, user privacy, and trust establishment and abuse in open environments such as eBay. Prerequisite: EECS 563 or EECS 780. LEC

**EECS 713** High-Speed Digital Circuit Design (3). Basic concepts and techniques in the design and analysis of high-frequency digital and analog circuits. Topics include: transmission lines, ground and power planes, layer stacking, substrate materials, terminations, vias, component issues, clock distribution, cross-talk, filtering and decoupling, shielding, power grid design, Latchup. Prerequisite: EECS 312 and senior or graduate standing. EECS 420 recommended. LEC

**EECS 716** Formal Language Theory (3). Formal language generation by grammars, recognition by automata (finite and pushdown automata, Turing machines), and equivalence of these formulations; elementary containment and closure properties. Emphasis on context-free, deterministic context-free and regular languages. Prerequisite: EECS 510 or equivalent. LEC

**EECS 718** Graph Algorithms (3). This course introduces students to computational graph theory and various graph algorithms and their complexities. Algorithms and applications covered will include shortest paths, spanning trees, minimum spanning tree, network flow, matching, independent set, dominating set, vertex and edge cover, Hamiltonian path and Hamiltonian cycle, satisfiability, and graph coloring. Prerequisite: EECS 420 or equivalent. LEC

**EECS 720** Electromagnetics for Communications and Radar (3). Topics in electromagnetic fields and waves, including antennas, reflectors, scattering, electromagnetic field properties, field and circuit equations, basic waveguide theory, waveguides and antennas, propagation in guide wave structures, microwave reflectors, and waveguide components. The four-hour version of the course includes EECS 560 or graduate standing with consent of instructor. LEC

**EECS 721** Introduction to Radar Systems (3). Survey of microwave systems, techniques, and hardware. Guided-wave theory, microwave network theory, active and passive microwave components. The four-hour version of the course includes a laboratory. Prerequisite: EECS 420. LEC

**EECS 725** Introduction to Radar Systems (3). Basic radar principles and applications. Radar range equation. Pulsed and CW modes of operation for detection, ranging, and extracting Doppler information. Prerequisite: EECS 360, EECS 420, or equivalent. EECS 622 recommended. LEC

**EECS 728** Fiber-Optic Measurement and Sensors (3). The focus of this course will be on fundamental theory and various methods and applications of fiber-optic measurement and sensor systems. Topics include: optical power and loss measurements, optical spectrum analysis, wavelength measurements, polarization measurements, intensity and power measurements, PMD measurements, optical amplifier characterization, OTDR, optical components characterization and industrial applications of fiber-optic sensors. Prerequisite: EECS 628 or equivalent. LEC

**EECS 730** Introduction to Bioinformatics (3). This course provides an introduction to computational tools and databases widely used in bioinformatics. The underlying algorithms of existing tools will be discussed. Topics include: molecular biology databases, sequence alignment, gene expression data analysis, protein structure and function, protein analysis, and proteomics.
EECS 735 Automated Theorem Proving (3). Computer-based theorem-proving methods for selected domains such as plane geometry, symbolic integral calculus, and propositional calculus are reviewed. Theoretical framework of theorem proving is discussed, including resolution, linear resolution, and paramodulation. Applications of these procedures to areas such as proofs of program correctness, deductive question answering, proof solving, and program synthesis. Prerequisite: EECS 730 and a knowledge of mathematical logic equivalent to BIOL 150, or consent of instructor. LEC

EECS 736 Computer-Aided Design (3). Introduction to design and drafting of concurrent (multithreaded, parallel, or distributed) software systems. The course examines problems and solutions common to all concurrent software, including interference, deadlock, consensus, resource allocation, coordination, global predicate evaluation, ways of expressing concurrency, concurrent I/O, debugging, fault tolerance, and heterogeneity. Prerequisite: EECS 448 and EECS 678. LEC

EECS 737 Computational Genomics (3). This course focuses on the computational analysis of genomes. Computational methods are studied in tandem with applied studies of genome structure, function, and evolution. Topics include chromatin structure, epigenetic marks, genomics and proteomics, metagenomics, and sequence analysis and modeling, dynamic programming, formal language and linguistic models, Markov models and hidden Markov models, combining multiple learners, reinforcement learning, Bayesian learning etc. will be covered. Prerequisite: Graduate standing in CS or CoE or consent of instructor. LEC

EECS 739 Scientific Parallel Computing (3). This course is concerned with the applied aspects of scientific parallel computing. Scientific and natural sciences applications and computational techniques, State-of-the-art computing methods are studied along with contemporary applications. The course takes a performance-oriented applied approach, with applications ranging from digital signal processing to scientific applications in Artificial life issues, and system evaluation. Prerequisite: Graduate standing or consent of instructor and experience with C, C++, or FORTRAN. LEC

EECS 740 Digital Image Processing (3). This course gives a hands-on introduction to the fundamentals of digital image processing. Topics include: image formation, image transformations, image enhancement, image restoration, image reconstruction, image compression, and image segmentation. Prerequisite: EECS 672 or EECS 744. LEC

EECS 741 Computer Vision (3). This course gives a hands-on introduction to the fundamentals of computer vision. Topics include: image formation, edge detection, imaging geometry, image measurement, image interpretation, shape from shading, texture analysis, stereo imaging, motion analysis, shape representation, object recognition. Prerequisite: EECS 672 or EECS 744. LEC

EECS 742 Digital Video for Multimedia Systems (3). An introduction to digital video for multimedia systems. Topics include: fundamentals of digital video, coding and non-linear editing, video feature detection (temporal segmentation, motion estimation), content based video classification, video compression techniques and standards (MPEG-1, 2, 4, 7), video streaming, and multimedia applications. Digital video tools and techniques will be utilized in several programming projects. Prerequisite: EECS 740 or equivalent. LEC

EECS 743 Static Analysis (3). This course presents an introduction to techniques for statically analyzing programs. Coverage includes theoretical analysis, definition and implementation of a static analysis, abstraction of program behavior, and type and effects systems. The course presents both the underlying definitions and pragmatic implementation of these systems. Prerequisite: EECS 665 or EECS 662 or equivalent. LEC

EECS 744 Digital Signal Processing I (3). Discrete-time representation of signals and systems, Fourier transform, signal separation, sampling, implementation of linear time-invariant systems, filter implementation, digital filter design, discrete Fourier transform, and the fast Fourier transform. Prerequisite: EECS 360. LEC

EECS 745 Implementation of Networks (3). EECS 745 is a laboratory-focused implementation of networks. Topics include: network implementation, packet switching, network programming languages; the presentation begins with basic lambda calculus and mechanisms for evaluating lambda calculus terms. Using lambda calculus to define, evaluate and type check common programming constructs. Prerequisite: EECS 672 or EECS 744. LEC

EECS 746 Queueing Systems (3). This course introduces the fundamental concepts of queueing systems fundamentals. For example, EECS 678 or equivalent. LEC

EECS 747 Mobile Robotics (3). Design, construction, and programming of mobile robots. Topics include computational hardware, designing and prototyping, sensors, mechanics, motors, power, robot programming, robot design principles, and current research in mobile robotics. Prerequisite: Knowledge of at least one modern programming language. LEC

EECS 749 Knowledge-Based Systems (3). General concepts of intelligent problem solving, rule-based systems, distributed AI reasoning under uncertainty, case-based reasoning, subsumption, and machine learning. Prerequisite: EECS 730. LEC

EECS 750 Advanced Operating Systems (3). This course builds on the foundation established by an introductory course in operating systems concepts (e.g. EECS 678). Some previously covered topics are revisited in far greater depth, including code re-

EECS 752 Concurrent Software Systems (3). This course introduces the design and implementation of concurrent (multithreaded, parallel, or distributed) software systems. The course examines problems and solutions common to all concurrent software, including interference, deadlock, consensus, resource allocation, coordination, global predicate evaluation, ways of expressing concurrency, concurrent I/O, debugging, fault tolerance, and heterogeneity. Prerequisite: EECS 448 and EECS 678. LEC

EECS 753 Embedded and Real Time Computer Systems (3). This course will cover emerging and proposed techniques and issues in embedded and real time computer systems. Topics will include new paradigms, enabling technologies, and challenges resulting from emerging application domains. Prerequisite: EECS 745 and EECS 678. LEC

EECS 755 Software Modeling and Analysis (3). Modern techniques for modeling and analyzing software systems. Course coverages concentrates on pragmatic, formal modeling techniques that support predictive analysis. Topics include formal modeling, static analysis, and formal analysis using model checking and theorem proving systems. Prerequisite: EECS 636 or equivalent. LEC

EECS 760 Implementation of Digital Communication Systems (3). This introduction to the implementation of digital communication systems will cover digital signal processing and integrated laboratory exercises. Topics covered include signal spaces, baseband modulation, bandwidth modulation, phase-locked loops, carrier phase recovery, symbol timing recovery, and basic performance analysis. Prerequisite: EECS 361 or equivalent undergraduate experience in signal processing systems, EECS 461, or an equivalent undergraduate course in probability. LBN

EECS 761 Programming Paradigms (3). An introduction of alternative programming paradigms and their representative on programming expressiveness and style. Emphasis is on a comparative understanding of a spectrum of programming paradigms, with some facility in the use of at least one typical language representative of each paradigm studied. The course will review and investigate as appropriate imperative, functional, object-oriented, parallel, and logical programming paradigms, plus additional paradigms as relevant. Prerequisite: EECS 662 or EECS 807 or equivalent. LEC

EECS 762 Programming Language Foundation I (3). This course presents a basic introduction to the semantics of programming languages. The presentation begins with basic lambda calculus and mechanisms for evaluating lambda calculus terms. Types are introduced in the form of simply typed lambda calculus and techniques for type inference and defining type systems are presented. Finally, techniques for using lambda calculus to define, evaluate and type check common programming language constructs are presented. Prerequisite: EECS 662 or equivalent. LEC

EECS 763 Introduction to Multiprocessor Systems on Chip (3). This course covers the latest trends in advanced computer architecture for multiprocessor systems on chip (MPSoC) and real-time embedded systems. The course will cover advanced aspects of MPSoC design, including performance modeling, design techniques, and technological trends. Prerequisite: EECS 647 and EECS 645 or equivalent. LEC

EECS 764 Analysis of Algorithms (3). Models of computations and performance measures; asymptotic analysis of algorithms; basic design paradigms including divide-and-conquer, greedy algorithms, branch-and-bound, dynamic programming, backtracking, and heuristics; and design and analysis of approximation algorithms; lower bound theory; polynomial transformation and the theory of NP-Completeness; additional topics may be selected from arithmetic complexity, graph algorithms, string matching, and other combinatorial problems. Prerequisite: EECS 660 or EECS 805 or equivalent. LEC

EECS 766 Resource Sharing for Broadband Access Networks (3). Connections between network customers and the network come in many forms, wireless data systems, e.g., IEEE 802.16, wireless cellular systems, e.g., 3G, coax cable networks, e.g., DOCSIS, fiber optic communications systems, e.g., EPON, copper twisted pair, e.g., DSL, and power-line communications systems. All of these systems use various resource sharing strategies. The resource sharing strategy is matched to the needs of specific systems as well as the operating environments in which they are used. Basic strategies and their implementations are covered. Prerequisite: EECS 647 and EECS both required. LEC

EECS 777 Information Retrieval (3). This course is given to students a hands on introduction to information retrieval systems. Classic textual information retrieval systems are studied, followed by presentation of current research in the area. Topics include: file structures, term-weighting schemes, text preprocessing, and integrated laboratory exercises. Prerequisite: EECS 647 or permission of instructor. LEC

EECS 774 Advanced Graphics (3). Advanced topics in graphics and graphics systems. Topics at the state of the art are typically selected from: photorealistic rendering; physiological models; real-time rendering; animation; general texture mapping techniques; point-based graphics; collaborative techniques; and others. Prerequisite: EECS 672 or permission of instructor. LEC

EECS 775 Computer-Aided Design (3). An introduction to design and drafting of concurrent (multithreaded, parallel, or distributed) software systems. The course examines problems and solutions common to all concurrent software, including interference, deadlock, consensus, resource allocation, coordination, global predicate evaluation, ways of expressing concurrency, concurrent I/O, debugging, fault tolerance, and heterogeneity. Prerequisite: EECS 448 and EECS 678. LEC
A KU doctoral student in electrical engineering was one of only 52 students across the nation to receive a NASA fellowship to help develop a radar to measure ice thickness and determine bedrock conditions below the ice sheets in Greenland and Antarctica.

Computer science degree programs allow a variety of plans, both theoretical and applied.

EECS 835 Protein Bioinformatics (3). This course emphasizes the applications of computational algorithms to main problems in bioinformatics and molecular biology. A variety of topics, including protein sequence alignments, profiles and protein structure classification and prediction, will be either introduced briefly or discussed in detail. Students will be asked to present some selected research papers. Prerequisite: EECS 730. LEC

EECS 837 Data Mining (3). Extracting data from data bases to data warehouses. Pre-processing of data: handling incomplete, uncertain, and vague data sets. Discretization methods. Methodology of learning from examples: rules of generalization, control strategies. Typical learning systems: ID3, AQ, C4.5, and LERS. Validation of knowledge. Visualization of knowledge bases. Data mining under uncertainty, using approaches based on probability theory, fuzzy set theory, and rough set theory. Prerequisite: Graduate standing in CS or CoE or consent of instructor. LEC

EECS 838 Applications of Machine Learning in Bioinformatics (3). This course is an introduction to the application of machine learning methods in bioinformatics. Major subjects include: biological sequence analysis, microarray interpretation, protein interaction analysis, and biological network analysis. Common biological and biomedical data sets will be used. There will also be time in class to present some selected research papers. Prerequisite: EECS 730 and EECS 738. LEC

EECS 839 Mining Special Data (3). Problems associated with mining incomplete and numerical data. The MLEM2 algorithm for rule induction directly from incomplete and numerical data. Association analysis and the Apriori algorithm. KNN and other statistical methods. Mining financial data sets. Problems associated with imbalanced data sets and temporal data. Mining medical and biological data sets. Induction of rule generators. Validation of data mining: sensitivity, specificity, and ROC analysis. Prerequisite: Graduate standing in CS or unit or consent of instructor. LEC

EECS 841 Computer Vision (3). The objective of this course is to give students a hands-on introduction to the fundamentals of computer vision. Topics include: Image Formation, Image Segmentation, Binary Image Analysis, Edge Detection, Line Drawing Interpretation, Shape from Shading, Motion Analysis, Stereo, Shape Representation, and Object Recognition. The objective of this course is to give students a hands-on introduction to the fundamentals of computer vision. Prerequisite: EECS 740 or equivalent. LEC

EECS 842 Digital Video for Multimedia Systems (3). An introduction to digital video for multimedia systems. Topics include basics of digital video, capture and non-linear editing, video feature detection (temporal segmentation, motion estimation), content based video classification, video compression techniques and standards (MPEG), video streaming, and multimedia applications. Digital video tools and techniques will be utilized in several programming projects. Prerequisite: EECS 740 or equivalent. LEC

EECS 843 Programming Language Foundation II (3). This course presents advanced topics in programming language semantics. Fixed point types are presented followed by classes of polymorphism and their semantics. System F and type variables are presented along with early and existentials. The lambda cube is introduced along with advanced forms of polymorphism. Several interpreters are developed implementing various type systems and associated type inference algorithms. Prerequisite: EECS 762. LEC

EECS 844 Digital Signal Processing II (3). Adaptive filtering, mathematics for advanced signal processing, cost function optimization, signal processing algorithms for optimum filtering and linear prediction, power spectrum estimation, steepest descent, adaptive algorithms. Prerequisite: EECS 744. LEC


EECS 846 Software Engineering II (3). This course is a continuation of the material presented in EECS 448 on the design and specification phase for production software. It includes a major project which will be carried out as a group effort. Students will be required to specify, design and document, and implement a major component of a project. Prerequisite: EECS 448 or equivalent. Not open to students who have taken EECS 810. LEC

EECS 849 Multiaagent Systems (3). General concepts of multiagent systems: distributed problem solving, distributed searching, planning and truth maintenance, rational decision making in societies of agents, learning in multiagent systems, approximation, and implementation. Prerequisites: EECS 730, consent of instructor. LEC

EECS 853 Introduction to Reconfigurable Computing (3). This course presents an introduction to the field of reconfigurable computing. Topics covered include basic organization of reconfigurable logic devices, computational models, hw/sw co-design techniques, synthesis and run-time systems for static and dynamic reconfiguration. Prerequisite: EECS 743 or equivalent. LEC

EECS 861 Random Signals and Noise (3). Fundamental concepts in random variables, random process models, power spectral density. Application of random process models in the analysis and design of signal processing systems, communication systems and networks. Emphasis on signal detection, estimation, and analysis of queues. This course is a prerequisite for most of the graduate level courses in radar signal processing, communication systems and networks. Prerequisite: An undergraduate course in probability and statistics, and signal processing. LEC

EECS 862 Principles of Digital Communication Systems (3). A study of communication systems using noisy channels. Principal topics are: information and channel capacity, baseband data transmission, digital carrier modulation, error control coding, and digital transmission of analog signals. The course includes a laboratory/computer aided design component integrated into the study of digital communication systems. Prerequisite: EECS 562. Corequisite: EECS 861. LEC

EECS 863 Analysis of Communication Networks (3). Modeling and analysis for performance prediction of communication networks. Topics include: an introduction to queueing theory; analysis of TDMA systems; modeling and analysis of networks of queues; analysis of congestion and flow control algorithms; analysis of routing algorithms; analysis of bus and ring networks. Prerequisite: EECS 861. LEC

EECS 864 Multiwavelength Optical Networks (3). Introduce methodologies for multiwavelength optical network design, control, and survivability. Prerequisite: EECS 663. LEC

EECS 865 Wireless Communication Systems (3). The theory and practice of the engineering of wireless telecommunication systems. Topics include cellular principles, digital radio propagation (including indoor and outdoor channels), radio link calculations, fading (including Rayleigh, Rician, and other models), packet radio, equalization, diversity, error correction coding, spread spectrum, multiple access techniques (including time, frequency, and code), and wireless networking. Current topics of interest will be covered. Corequisite: EECS 861. LEC

EECS 867 Statistical Natural Language Processing (3). Statistical approaches to processing natural language text have become dominant in recent years. This course is an introduction to statistical natural language processing (NLP). The course covers the theory and algorithms needed for building NLP tools. It provides broad but rigorous coverage of mathematical and linguistic foundations, as well as detailed discussion of statistical methods, allowing students to construct their own implementations. Topics include: word sense disambiguation, clustering, text classification, information retrieval, and other applications. Prerequisite: Fluency in programming and knowledge of basic statistics and probability. LEC

EECS 869 Error Control Coding (3). A study of communication channels and the coding problem. An introduction to finite fields and linear block codes such as cyclic, Hamming, Golay, BCH, and Reed-Solomon. Convolutional codes and the Viterbi algorithm are also covered. Other topics include trellis coded modulation, iterative (turbo) codes, LDPC codes. Prerequisite: EECS 862. LEC

EECS 872 High-Performance Networking (3). Comprehensive coverage of the discipline of high-bandwidth low-latency networks and communication, including high bandwidth-x-delay products, with an emphasis on principles, architecture, protocols, and system design. Topics include high-performance network architecture, software implementations; high-speed networking; switching; radio networking; routing; IP, and optical switching; IP lookup, classification, and scheduling; network processors, end system design and protocol optimization, network interfaces; storage networks; end-to-end protocols, mechanisms, and optimizations; and high-bandwidth low-latency applications. Principles will be illustrated with many leading-edge and emerging protocols and architectures. Prerequisite: EECS 563 or EECS 780. LEC

EECS 882 Mobile Wireless Networking (3). Comprehensive coverage of the disciplines of mobile and wireless networking, with an emphasis on architecture and protocols. Topics include cellular telephony, MAC algorithms, wireless PANs, LANs, MANs, and WANs; wireless and mobile Internet; mobile ad hoc networking; mobility management, sensor networks; satellite networks; and ubiquitous computing. Prerequisite: EECS 563 or EECS 780. LEC

EECS 888 Internet Routing Architectures (3). A detailed study of routing in IP networks. Topics include evolution of the Internet architecture, IP services and network characteristics, an overview of routing protocols, the details of common interior routing protocols and their characteristics. Emphasis on understanding Internet routing protocols and the implementation of policy. Issues will be illustrated through laboratories based on common routing platforms. Prerequisite: EECS 745. LEC

Electrical Engineering courses are offered on the Edwards Campus, 12600 Quivira Road, Overland Park, KS 66213-2402, phone (from Lawrence): 864-8400 or (913) 897-8400, http://emgt.ku.edu

THE UNIVERSITY OF KANSAS 2009-2011
Engineering Management

Director: Herbert R. Tuttle
The University of Kansas Edwards Campus
12600 Quivira Road, Overland Park, KS 66213-2402
http://emgt.ku.edu, (913) 897-8560; fax: (913) 897-8682
Professors Emeriti: Holtzman, Kraft, Zerwekh
Assistant Professor: Tuttle

The M.S. program provides a superior graduate education for technical managers from engineering, science, mathematics, and computer science. EMGT graduates are more effective managers in technology-based organizations and are better able to promote entrepreneurial activities for new businesses.

The EMGT program integrates management with technology by focusing on three dimensions:

- Technical: an understanding of and proficiency in engineering and science
- Human: the ability to build a collaborative effort within a group
- Conceptual: the ability to apply analytical thought to the management process and to the enterprise as a total system

The EMGT program offers these emphasis areas:

- Consulting engineering services
- Manufacturing/process engineering
- Manufacturing/quality and reliability

Courses are taught on weekday evenings or Saturdays on the KU Edwards Campus by Graduate Faculty members of the School of Engineering. Most courses are available by distance education.

Admission

Applications are invited from qualified graduates of accredited programs in engineering, science, mathematics, and computer science. All applicants must have a strong mathematics and science foundation (6 to 8 hours of calculus, 3 hours of differential equations, 6 hours of physics, and 3 hours of chemistry) as well as courses or demonstrated ability in statistics, probability, and linear algebra. The Graduate Record Examination is not required. Students from other KU programs taking EMGT classes should discuss prerequisites with the EMGT instructor or director before enrollment.

Applicants must fulfill general requirements (a cumulative undergraduate grade-point average of 3.0 or higher for probationary admission). Applicants also must have at least two years of full-time, post-baccalaureate experience in a technological environment.

A completed application includes the application fee, application form, résumé, one original transcript, and three recommendation forms. International students also must meet English, visa, and financial requirements. Application packets, recommendation forms, and other information may be requested from the EMGT office or downloaded from our home page.

Submit your application online at www.graduate.ku.edu.

Send all other requested application materials to
The University of Kansas Edwards Campus
Overland Park, KS 66213-2402

M. S. Degree Requirements

A minimum of 33 credit hours is required, including 18 hours of core courses, 12 hours of electives, and a 3-hour field project.

Core Courses (18 hours)

EMGT 806 Finance for Engineers ........................................... 3
EMGT 809 Personal Development for the Engineering Manager ......... 4
EMGT 810 Applications of Quantitative Analysis in Decision Making (3) or EMGT 811 Engineering Systems Simulation (3) .......................... 3
EMGT 913 Design Project Management in Professional Practice (3) or EMGT 914 Design Management of Internship Projects (3) or EMGT 944 Managing Software Development Projects (3) ............................. 3
EMGT 921 Strategic Analysis of Technology Projects ............................................................. 3
Electives (12 hours). These may be drawn from three areas:
1. Engineering Management
   EMGT 800 Special Topics in Engineering Management (1-4)
   EMGT 801 Management Theory and Practice for Engineering Managers (3)
   EMGT 802 Statistical Analysis and Prediction of Engineering Systems (3)
   EMGT 803 Technological Forecasting and Assessment (3)
   EMGT 804 Business Development and Marketing of Professional Services (3)
   EMGT 830 Innovations (3)
   EMGT 807 Labor and Employee Relations for the Engineering Manager (3)
   EMGT 808 Quality Management (3)
   EMGT 812 Law and the Design Professional (3)
   EMGT 814 Financial and Managerial Accounting for the Engineer (3)
   EMGT 824 Product Marketing for Engineering Managers (3)
   EMGT 840 Systems Approach to Engineering (3)
   EMGT 848 Information Technology for Management (3)
   EMGT 850 Environmental Issues for Engineering Managers (3)
   EMGT 854 Management of Business Intelligence and Security for Strategic Planning (3)
   EMGT 860 Special Problems in Engineering Management (1-4)
   EMGT 862 Manufacturing Systems Integration (3)
   EMGT 867 Advanced Operations Management (3)
   2. Graduate courses and enterprise projects approved from EMGT-approved technical discipline for which the student meets prerequisite requirements for enrollment.
Field Project (3)  
EMGT 935 Field Project (M.S.) ................................................................. 3

The candidate must pass a final oral examination defending the nonthesis project and demonstrating a working knowledge of engineering management.

Engineering Management Courses
EMGT 808 Principles of Engineering Management (3).
EMGT 800 Special Topics in Engineering Management (1-4). Advanced or experimental work of a specialized nature representing unique or changing needs and resources in engineering management. RSH
EMGT 801 Management Theory and Practice for Engineering Managers (3). This course is intended to introduce the student to the basic concepts of management and motivation for the management and generation of engineering organizations. This course presents a history of the schools of management thought through the modern research that began the participative management movement. The course will investigate classical motivational theories and management style principles. The student will perform research to determine how their employer or clients apply these theories. LEC
EMGT 802 Statistical Analysis and Prediction of Engineering Systems (3). Applied statistical methods to engineering systems will be introduced in this course for analyzing engineering and management systems. Emphasis will be given to applied regression analysis and variance, and regression techniques in decision making. LEC
EMGT 803 Technological Forecasting and Assessment (3). This course focuses on the interpretation and development of techniques of technology forecasting such as Delphi method, time series analysis, auto-regressive moving averages and forecasting model. Prerequisite: Skills in probability, statistics, and computer application. LEC
EMGT 804 Business Development and Marketing of Professional Services (3). Principles and theories of business development and marketing as applicable to professional engineering design and architectural practices. LEC
EMGT 805 Management of Innovation (3). Management of technology and technological change through innovation, imitation, and obsolescence; planning, organizing, motivation, and control for innovation; organizational climate and its effects on innovative attitudes and entrepreneurial decision making; analysis of R&D strategies in small and large companies; innovation in multinational corporations. LEC
EMGT 806 Finance for Engineers (3). A study of finance including financial planning and management in technological based organizations. Topics covered include financial statement analysis, present value of financial markets, capital budgeting, tax, investment decisions, replacement decisions, cash flow budgets, and sources of capital. LEC
EMGT 807 Labor and Employee Relations for the Engineering Manager (3). This course is an introduction to labor relations and human resources, including employment practices in unionized and non-union organizations. The course examines the nature and scope of the legal relations, human relations and collective bargaining with emphasis on the negotiation and administration of labor agreements. Included will be a survey of the historical, legal, and structural environments that influence the collective bargaining process. Research topics focus on some of the most important issues in the workplace: protecting jobs, increasing productivity, computerization, worker participation, expanding and declining labor markets, and new methods of decision making in the human resources field. LEC
EMGT 808 Quality Management (3). The overwhelming challenge that faces the U.S. today is the need to retain its competitive position in the world marketplace. This course offers a broad view of Quality Management in that it focuses on the management of quality, rather than the technical control. For everyone involved, the ability to learn the Malcolm Baldridge award criteria which focuses on leadership, data analysis, human resources, quality assurance, quality results, and customer satisfaction. In addition, a unique approach of the multifaceted diversity of quality leadership such as Deming, Juran, and Crosby will be covered. Practical applications of TQM concepts in a technological environment will be stressed throughout the course. LEC
EMGT 809 Personal Development for the Engineering Manager (4). Includes the study of theories, tests for, and objectives of engineering and management ethics. Examines moral and ethical decision making in management and the role of the manager in society. Includes an introduction to persuasive communication style for each student. Includes management of stress, time, and career. Each student prepares a career and personal development plan. Managerial writing and communication skills are developed through weekly written assignments and proposal preparation, internal correspondence concerning praise and reprimand, and organizational policy preparation. Interpersonal and nonverbal communication styles are studied. Relies heavily on instructor-assisted peer mediation of topics, self-assessment, and small group discussions. LEC
EMGT 810 Applications of Quantitative Analysis in Decision Making (3). This course emphasizes the use of general system theory, classical optimization and optimality conditions, model development, and theory and application of mathematical programming, to include linear programming, dynamic programming, queuing models, integer and non-linear programming, and introduction to decision analysis. Prerequisite: Elementary skills in linear algebra, probability, calculus, and computer application. LEC
EMGT 811 Engineering Systems Simulation (3). Methods of developing, implementing, and using computer programs for modeling and simulating technical processes. Emphasis is on the definition and significance of accounting terminology, the communication interfaces between engineering managers and the controller’s office are examined as are recent developments in cost accounting. Principles of cost and managerial accounting, control, interpretation, performance analysis, benchmarking, and performance reviews, conflict resolution, and group dynamics. Presents the project manager’s job from an augmented model of the Blake-Mouton grid. Prerequisite: Admission to graduate study in engineering or architecture. LEC
EMGT 814 Financial and Managerial Accounting for the Engineer (3). The elements of the accounting cycle are defined so as to help the student understand the process from the balance sheet for the last period through the journal, ledger, income statement, trial balance and an adjusted balance for the current period. There is a heavy emphasis on the definition and significance of accounting terminology. The communication interfaces between engineering managers and the controller’s office are examined as are recent developments in cost accounting. Principles of cost and managerial accounting, control, interpretation, performance analysis, benchmarking, and performance reviews, conflict resolution, and group dynamics. Presents the project manager’s job from an augmented model of the Blake-Mouton grid. Prerequisite: Admission to graduate study in engineering or architecture. LEC
EMGT 821 Strategic Analysis of Technology Projects (3). A study of the economic feasibility of competing engineering projects including the application of break-even analysis and discounted cash flow techniques under uncertainty. Includes estimation of demands, return, and forecasting. A study of the financial figures of merit used to evaluate competing engineering projects including the DuPont rate of return method, the accounting rate of return, the operating return method, return on equity, earnings per share, margin on sales, selling price of stock, corporate credit rating, total sales, market share, market entry, and proforma year-end statements. A study of the strategic evaluation of a project including the proposed product or service, the organization, the environment, and the venture in general. Prerequisite: Admission to the M.S. Engineering Management program or consent of instructor, EMGT 806, a course in applied statistics. LEC
EMGT 822 Management of Internal Engineering Projects (3). The purpose of this course is to introduce the student to all aspects of managing a project within a company or organization. The entire project life cycle will be covered from inception to close-out, and many practical considerations will be discussed including material procurement, working with contractors and consultants, selecting software, and managing the project team. The course will focus on how to manage project scope, schedule budget, and using project software. A semester project is required presenting an example of project management or investigating some aspect of project management in detail. LEC
EMGT 824 Product Marketing for Engineering Managers (3). Basic principles of marketing applicable to engineers, particularly those involved in design-based enterprise. Includes a broad overview of the major components of marketing (competition, product, price, promotion, and distribution). Also details the integration of those components into the marketing plan. The students will develop a group marketing plan for an agreed-upon product that will require an independent study program in engineering, or Pittsburgh State’s technology management program. LEC
EMGT 830 Case Studies in Engineering Management (2). A capstone course for the program which provides an integration of the material presented in the other courses through the utilization of several engineering management case studies. Prerequisite: Completion of a minimum of 21 credit hours in the Engineering Management program. LEC
EMGT 835 Field Project (M.S.) (1-3). A problem in engineering management, the satisfactory completion of which satisfies the project requirement for the degree of Master of Science in Engineering Management. THE

EMGT 840 Systems Approach to Engineering (3). This is a first course at the graduate level introducing the formal methods and processes in bringing complex systems into being and improving existing systems. Systems include both products and services. Emphasis is placed on: the definition of customer needs, the entire life cycle of systems, and introduction to formal specification methods, the value to cost ratio and the management of the systems engineering process. LEC

EMGT 844 Managing Software Development Projects (3). This course investigates the area of managing software development and presents the management process as a means of optimizing business considerations and project demands. Uncertainties in product/service specifications, technology risks, cost and delivery requirements impact the management functions. Cost and schedule estimation techniques are presented to- gether with project planning, risk control and measurement technologies. The tech- niques presented in this course are directly applicable to management in other industry segments. Guest speakers are used to demonstrate applications in this course. LEC

EMGT 848 Information Technology for Management (3). This course is intended to bring the student up to date on developments in the field of information technol- ogy (IT) and to prepare the student to apply those technologies in the workplace. To this end, the course is divided into two components. First, current hardware, software, and networking technologies will be presented. Topics include relational databases, object oriented design and programming, client-server technologies, the Internet, and emerging communication technologies. Second, approaches to evaluating and implementing the range of information technology alternatives available to business will be presented. Topics in this area include software develop- ment, management and evaluation, IT project management, information integrity and security, and the effects of IT on people and the organization. LEC

EMGT 850 Environmental Issues for Engineering Managers (3). This course provides a survey of the environmental regulations, environmental problems, and environmental solutions that must be dealt with by engineering managers regardless of their function or industry. A historical perspective on the environment is presented followed by dis- cussion of pollution generation (sources), transportation, fate, and effects. The quantity and quality of various types of pollutants emitted to various media and the risk posed by these pollutants is analyzed. The regulatory process is examined from the perspec- tive of the legislator, the regulator, the regulated, the engineer, and the public. LEC

EMGT 854 Management of Business Intelligence and Security for Strategic Planning (3). Management of competitive intelligence and security in business strate- gic planning is a first course at the graduate level that introduces the formal meth- ods, concepts, and processes of competitive intelligence and security which are in- vital to both strategic business planning and day-to-day business operations. This course provides access to the tools used to identify what is happening in the busi- ness environment including legislation, economics, regulatory changes, competi- tion, customers, etc. that affect a business' strategy and operations. Further, these tools are applied to determining what will likely happen in the future and how to use those forecasts to optimize strategic and operational plans. LEC

EMGT 860 Special Problems in Engineering Management (1-4). Graduate-level inves- tigation requiring original, independent research on problems or subjects of immedi- ate interest to a student or faculty member. Intended to develop a student's capability in coordinating two or more of the following: technology, finance, economics, applied mathematics, and managerial communication. EMGT 860 may be repeated for credit to a maximum of four hours in the degree program. Prerequisite: Approval of an out- line of the proposed project by the instructor and the program director. RSH

EMGT 862 Manufacturing Systems Integration (3). This course develops the ra- tionale and need for the integration of manufacturing systems, and deals with the multitude of practical problems involved with manufacturing systems integration. Topics covered include intelligent manufacturing subsystems and vendor-specific islands of automation, on-line and off-line information sources, and end users of information in the manufacturing enterprise. Engineering details covered include the types of communication links available between systems, communication standards, network and protocol alternatives, and hardware platform alternatives. Management concepts covered include the top-down design/bottom-up imple- mentation approach to system integration, long-range planning and management of integration projects, reliability and security issues, and human factors. LEC

EMGT 867 Advanced Operations Management (3). This course provides the student with up-to-date information of the management of manufacturing opera- tions. Emphasis is on quantitative methods for designing and analyzing manufactur- ing processes, simulation of manufacturing processes, and recent paradigms in manufacturing including just-in-time production, synchronous manufacturing, and agile manufacturing. A semester project is required covering some aspect of operations management in detail. LEC

■ Engineering Physics Courses

EPFX 501 Introductory Quantum Mechanics (3).
EPFX 510 Advanced Quantum Mechanics (3).
EPFX 531 Electricity and Magnetism (3).
EPFX 534 Electromagnetic Theory (3).
EPFX 536 Electronic Circuit Measurement and Design (3).
EPFX 537 Numerical and Computational Methods in Physics (3).
EPFX 538 Physical Measurements (4).
EPFX 540 Microwaves and Semi-Conductors (3).
EPFX 561 Introduction to Nuclear Physics (3).
EPFX 600 Special Topics in Physics and Astrophysics (2-3).
EPFX 611 Design of Physical and Electronic Systems (4).
EPFX 614 Modern Optics (3).
EPFX 615 Numerical and Computational Methods in Physics (3).
EPFX 621 Mechanics I (3).
EPFX 622 Mechanics II (3).
EPFX 623 Physics of Fluids (3).
EPFX 631 Electromagnetic Theory (3).
EPFX 641 Introduction to Nuclear Physics (3).
EPFX 655 Optics (3).
EPFX 661 Introduction to Elementary Particle Physics (3).
EPFX 671 Thermal Physics (3).
EPFX 681 Concepts in Solids (3).
EPFX 691 Astrophysics I (3).
EPFX 693 Gravitation and Cosmology (3).

■ Engineering Courses

ENGR 504 Technical Writing for Engineers (1-3).
ENGR 535 Verbal Communications in Engineering (1).
ENGR 835 Project (M.E.) (3-6). A design problem or system study satisfying the project requirement for the Master of Engineering degree. THE

ENGR 940 Project (D.E.) (1-16). A major design problem or system study satisfying the project requirement for the Doctor of Engineering degree. THE

Engineering Physics

Chair: Stephen J. Sanders
Malott Hall, 1251 Wescoe Hall Drive, Room 1082
Lawrence, KS 66045-7572, www.physics.ku.edu, (785) 864-4626
No graduate program in engineering physics is offered. The courses listed below are applicable toward degrees in related areas.

■ Engineering Physics Courses

EPFX 501 Honors Research (1-4).
EPFX 503 Undergraduate Research (1-4).
EPFX 511 Introductory Quantum Mechanics (3).
EPFX 531 Electricity and Magnetism (3).
EPFX 534 Electromagnetic Theory (3).
EPFX 536 Electronic Circuit Measurement and Design (3).
EPFX 600 Special Topics in Physics and Astrophysics: (3).
EPFX 615 Numerical and Computational Methods in Physics (3).
EPFX 621 Mechanics I (3).
EPFX 622 Mechanics II (3).
EPFX 623 Physics of Fluids (3).
EPFX 631 Electromagnetic Theory (3).
EPFX 641 Introduction to Nuclear Physics (3).
EPFX 655 Optics (3).
EPFX 661 Introduction to Elementary Particle Physics (3).
EPFX 671 Thermal Physics (3).
EPFX 681 Concepts in Solids (3).
EPFX 691 Astrophysics I (3).
EPFX 693 Gravitation and Cosmology (3).

Mechanical Engineering

Chair: Ronald L. Dougherty
Learned Hall, 1530 W. 15th St., Room 3138
Lawrence, KS 66045-7618, www.me.engr.ku.edu, (785) 864-3181
Graduate Adviser: Bedru Yimer, 3135C Learned Hall, (785) 864-2982
Professors: Bell, Dougherty, Faddis, Spencer, Surana, Yimer
Professors Emeriti: Bauleke, Burmeister, Reese
Associate Professors: Fischer, Friis, Luchies, Maletsy, Sorem, TenPas, Umholtz, Wilson
Assistant Professors: Kieweg, Romkes, Yang
The department offers Master of Science in mechanical engi- neering, Doctor of Philosophy, and Doctor of Engineering degrees. Areas of study in mechanical engineering include computer-inte- grated manufacturing, computational mechanics and finite element analysis, heat transfer and thermal-fluid system design, mechanical system design and analysis, control systems, and biomechanics and biomaterials.

Career opportunities for engineers include a variety of positions with business, industry, and government.

KU is recognized as a leader in the use of radar for geologic mapping.
Admission
To qualify for any of the graduate programs, a student generally must have earned an accredited baccalaureate degree in mechanical engineering. A student with good preparation in some other engineering discipline, or a related field such as physics, may qualify by taking appropriate undergraduate courses specified by the graduate admissions committee.

For admission to regular status, the student must have an undergraduate grade-point average of at least B (3.0 on a 4.0 scale). For students whose undergraduate grade-point averages are below 3.0 but no lower than 2.75 on a 4.0 scale, probationary admission is considered on a case-by-case basis. Graduate Record Examination scores are required.

Submit your application online at www.graduate.ku.edu. Send all other requested application materials to:

The University of Kansas
Department of Mechanical Engineering
1530 W. 15th St., Room 3013
Lawrence, KS 66045-7618

M.S. Degree Requirements
The department offers a thesis option and a non-thesis option leading to the M.S. degree. Both options require a minimum of 30 credit hours of graduate work. The thesis option must include a thesis for at least 6 hours of credit. The non-thesis option requires a minimum of 30 credit hours of graduate work, which must include a 3-credit-hour independent investigation.

The M.S. degree student selects an advisor in the first semester of graduate study. The student and the student’s advisory committee determine a program of study during the first semester of enrollment. The program of study includes (1) a major with a minimum of 12 credit hours (excluding credit for mathematics and the independent investigation or thesis) selected from mechanical engineering courses and (2) no fewer than 3 credit hours dealing with advanced mathematics.

A thesis-option student is expected to do original work that would be the basis of a paper suitable for publication in a refereed journal. A non-thesis-option student who selects the 3-credit-hour independent investigation must do an analytical or experimental study acceptable to the advisor.

A maximum of 6 hours of mechanical engineering courses numbered between 500 and 699 may be included in the program. Courses either required or used for the B.S. degree may not be used to fulfill M.S. degree requirements. Each M.S. candidate must pass a final examination, which may be oral, or both written and oral, as determined by the advisory committee.

KU-KUT Joint M.S. Degree Requirements. The department participates in a joint Master of Science degree option with the School of Mechatronics/School of Information Technology, Korea University of Technology and Education (KUT). The emphasis at KU is in biomaterials, and the emphasis at KUT is in mechatronics and systems engineering. KUT courses are taught in English.

An academic adviser is designated for each student by both KU and KUT; they are members of the academic advisory committee and oversee the Plan of Study. Support (access to course work, libraries, research facilities, computers, application for financial support, application for living quarters) for each student is provided by both KUT and KU.

A minimum of 30 credit hours of graduate work is required including a thesis for 6 hours. At least 15 of the 30 semester credit hours, including a required 6 hour thesis, are taken at each institution. The Plan of Study consists of either:

a) KUT: 6 credit hrs. course work, 6 hrs. thesis; and KU: 15 hrs. course work; or
b) KU: 9 credit hrs. course work, 6 hrs. thesis; and KUT: 15 hrs. course work.

A list of approved KU and KUT courses is available from the director. Three credit hours of approved mathematics are required. Any combination of KUT and KU credit consistent with the time spent by the faculty members in supervising thesis work that totals 6 credit hours is permissible. A minimum of 15 credit hours must be taken from each institution.

A thesis for 6 credit hours is required. The topic must be approved by the academic advisers at KUT and at KU. Review of work may be done by exchanging thesis materials electronically, by surface mail, or by direct participation in review meetings. The thesis defense committee consists of at least one faculty member each from KUT and KU; it is preferred that all committee members be present at the examination. Each candidate must pass a final examination, which may be oral, or both written and oral, as determined by the advisory committee.

The institution at which the major part of the thesis project is accomplished awards a single degree and diploma. The KU transcript of each student who completes the program states that the degree is awarded for a program of study accomplished in collaboration with Korea University of Technology and Education. Korea University of Technology and Education places a similar statement on the KUT transcript. The institution not awarding the degree and diploma may award a certificate.

Ph.D. Degree Requirements
Students must spend a minimum of three full academic years or the equivalent beyond the baccalaureate in resident graduate study at KU or some other approved university. A minimum grade-point average of 3.5 on a 4.0 scale in master’s degree work normally is required for admission. The student normally takes a qualifying examination in the first semester of participation in the doctoral program on regular status.

The doctoral qualifying examination covers basic material from major areas in mechanical engineering and advanced materials from the student’s specialty.

On successful completion of the qualifying examination, the student selects a major professor to serve as the chair of the advisory committee and to direct the research. The advisory committee helps the student prepare a Plan of Study, conducts the comprehensive examination, and helps the student plan research.

The comprehensive examination has written and oral components. The written component contains a detailed literature review of existing research in the proposed area as well as a description of the work or research plan to be completed for the dissertation. During the oral examination, the aspirant must defend the proposed work or research plan and demonstrate proficiency in the specialization.

A minimum of 72 hours of graduate credit beyond the bachelor’s degree is required for a Ph.D. For students with a 30-credit-hour master’s degree in mechanical engineering, a minimum of an additional 18 credit hours of graduate course work and a 24-...
hour dissertation are required. If a master’s degree is not sought, 42 hours of graduate course work beyond the bachelor’s degree and a 30-hour dissertation are required. A minimum of 9 credit hours of the 18 (or 21 of the 42) must be mechanical engineering courses numbered 700 to 990 (excluding ME 702, ME 899, ME 901, and ME 999). A minimum of 9 credit hours of advanced mathematics beyond the bachelor’s degree is required. Following completion of 18 credit hours of course work beyond the master’s degree, the student must pass a comprehensive examination.

The Ph.D. student must demonstrate proficiency in at least one research skill area. Since the needs of each student differ, the research skills are determined with the advice and approval of the advisory committee. Possible research skills include foreign language and computer science. A dissertation is required of each doctoral candidate. The Ph.D. dissertation presents the results of the student’s research investigation. It is expected to make an original contribution to technical knowledge of sufficient quality to merit publication in refereed journals. A final oral examination or a defense of the dissertation is required.

**D.E. Degree Requirements**

The degree of Doctor of Engineering is granted upon completion of at least 90 credit hours of post-baccalaureate work. The minimum course work requirement is 54 credit hours, which must include the following:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering design</td>
<td>9</td>
</tr>
<tr>
<td>Engineering management</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics</td>
<td>9</td>
</tr>
<tr>
<td>Project</td>
<td></td>
</tr>
</tbody>
</table>

The remaining 27 credit hours of course work are selected to meet the student’s interests and goals, subject to the approval of the advisory committee. Course work required for a master’s degree may be included in this 54-hour total if approved by the advisory committee. A minimum of 21 credit hours of mechanical engineering courses numbered 700-990 (excluding ME 702, ME 899, and ME 901) must be included. In addition, the following research components are required for the degree:

<table>
<thead>
<tr>
<th>Research Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>24</td>
</tr>
</tbody>
</table>

Each student must spend at least 12 consecutive months of approved internship in industry or government. One credit hour is given per month of approved internship experience, provided the student is enrolled in ME 901. The internship is intended to involve the student at a level that promotes experience in project management. Students must pass a qualifying examination, a comprehensive examination, and a final oral examination. (See Ph.D. Degree Requirements.)

**Financial Aid**

Various types of financial aid are available, including teaching and research assistantships and graduate fellowships. Students holding teaching assistantships for 40-percent time or more receive tuition waivers but may pay campus fees. Students holding research assistantships may pay reduced tuition. Fellowships with stipends plus fees may be available for particularly outstanding students. Applications for fellowships or assistantships should be submitted before the academic year for which the fellowship or assistantship is desired. Similarly, applications for assistantships should be submitted two months before the desired entry date.

**Mechanical Engineering Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 501</td>
<td>Mechanical Engineering Design Process</td>
</tr>
<tr>
<td>ME 508</td>
<td>Numerical Analysis of Mechanical Engineering Problems</td>
</tr>
<tr>
<td>ME 510</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ME 512</td>
<td>Introduction to Thermal Engineering</td>
</tr>
<tr>
<td>ME 520</td>
<td>Dynamics of Machinery</td>
</tr>
<tr>
<td>ME 528</td>
<td>Mechanical Design I</td>
</tr>
<tr>
<td>ME 590</td>
<td>Special Topics:</td>
</tr>
<tr>
<td></td>
<td>(1-5)</td>
</tr>
</tbody>
</table>

**ME 612 Heat Transfer** (3).

**ME 627 Automotive Design** (3).

**ME 628 Mechanical Design II** (3).

**ME 633 Basic Biomechanics** (3).

**ME 636 Internal Combustion Engines** (3).

**ME 637 Steam Power Plants** (3).

**ME 640 Design Project** (1).

**ME 641 Design Project Option A** (2-3).

**ME 642 Design Project Option B** (3).

**ME 643 Design Project Option C** (3).

**ME 644 Design Project Option D** (2-3).

**ME 645 Design Project Option E** (2-3).

**ME 661 The Finite Element Method for Stress Analysis** (3).

**ME 665 Control Systems** (3).

**ME 696 Design for Manufacturability** (3).

**ME 702 Mechanical Engineering Analysis** (3). A study of advanced methods for engineering analysis of practical problems utilizing fundamental principles from engineering disciplines. The emphasis is on the solution of these problems and the interpretation of results. Prerequisite: A course in differential equations. LEC.

**ME 708 Microcomputer Applications in Mechanical Engineering** (3). Design and implementation of interfaces of microcomputers to mechanical equipment. Includes laboratory experiments presenting selected industrial applications. Emphasizes computer aided design, finite element analysis, and software engineering. Prerequisite: Permission of instructor. LEC.

**ME 711 Bearings and Bearing Lubrication** (3). Theoretical aspects of lubrication, determination of pressure distribution in bearings from viscosity flow theory, application of hydrodynamic and hydrostatic bearing theories to the design of bearings, high speed bearing design problems, properties of lubricants, methods of testing. Prerequisite: ME 510 and a course in tribology. LEC.

**ME 712 Advanced Engineering Thermodynamics** (3). An advanced course in thermodynamics, mathematical in nature, with emphasis on critical re-evaluation of the laws of thermodynamics, thermodynamics of one-dimensional gas flow, development of the classical thermodynamic relations for application to engineering problems. Prerequisite: ME 508 and ME 412. LEC.

**ME 720 Advanced Dynamics of Machinery** (3). Dynamics of particles and of rigid bodies with advanced engineering applications; generalized coordinates, Hamilton’s principle, Lagrange’s equations, Hamilton-Jacobi theory. Prerequisite: ME 520. LEC.

**ME 733 Gas Dynamics** (3). A study of the thermodynamics and fluid dynamics of gaseous media. Emphasis is placed on the rigorous application of conservation laws to represent physical processes. Classical and statistical models for the thermodynamic and transport properties are examined. Applications include determination of gas properties, wave propagation, and high-speed flow. Prerequisite: ME 412 and ME 510 or equivalents. LEC.

**ME 740 Mechanical Vibrations** (3). Linear vibration theory. Lumped parameter approximations and distributed systems. Generalized properties and numerical solutions. Prerequisite: ME 508 and ME 528. LEC.

**ME 750 Biomechanics of Human Motion** (3). Fundamentals concepts of anatomy and physiology are introduced but the focus is on the biomechanics of human motion. Human body segment kinematics and joint kinematics are analyzed. An introduction to muscle mechanics is provided. Applications in balance and gait are covered. Corequisite: ME 520. LEC.

**ME 751 Experimental Methods in Biomechanics** (3). This course will focus on methods of experimental measurement and computational modeling used in biomechanics. Instrumentation used to measure three-dimensional motion, ground reaction forces, center of pressure and EMG measures are considered. Methods used for inverse dynamics, direct dynamics and simulation are introduced. Corequisite: ME 520. LEC.

**ME 753 Bone Biomechanics** (3). Provides an in-depth knowledge of bone as a living mechanical system. Topics include the microstructure, biology, mechanical properties, mechanical modeling, adaptation of bone to the mechanical environment, and its simulation. Students assignments include homework, a poster presentation, basic finite element analysis laboratory, and bone remodeling simulation. Prerequisite: ME 311 or prerequisite: ME 311. LEC.

**ME 755 Computer Simulation in Biomechanics** (3). Provides an in-depth knowledge of computer simulation and computational modeling used in biomechanics. Application of design principles to three-dimensional and two-dimensional finite element models, computer aided design, computer graphics, and computer modeling and simulation. Prerequisite: ME 311 or prerequisite: ME 311. LEC.

**ME 756 Biofluid Dynamics** (3). An introduction to the fundamentals of biofluid dynamics, and the application of these principles to a variety of biological flows. Flows in microvessels, drug delivery, and biotechnology. Prerequisite: University courses in fluid dynamics and/or thermodynamics. LEC.
Mechanical Engineering

ciples of dynamics, lumped parameter systems, and control theory to problems in biomechanics. Topical topics include muscle mechanics, muscle control, kinematics of control, proprioception, anatomy of the muscular and nervous systems, and system dynamics in locomotion and other movements. Prerequisite: ME 520 or equivalent. Corequisite: ME 682 or permission of instructor. LEC

ME 758 Physiological System Dynamics (3). This course covers the use of engineering systems modeling approaches to understand the function of physiological systems. Systems covered include the cardiovascular system, the respiratory system, the renal system, the gastrointestinal system, and the musculoskeletal system. Prerequisite: ME 520, Physics 121 or equivalent, or permission of instructor. LEC

ME 760 Biomedical Product Development (3). Introduction to methods of taking medical product inventions from conception to initial stage production. Students work in cross-functional teams to investigate development potential of inventions. Topics covered include product development processes, regulatory issues with the FDA, quality system requirements, SBSR/STR funding pathways, biomaterial and biomechanics issues in medical product design, and ethical considerations. Prerequisite: Senior or graduate student standing in engineering, business, industrial design, or an applicable life science field and permission of instructor. LEC

ME 765 Biomaterials (3). An introductory course on biomaterials science and consideration of biomaterials in the design of biomedical implants. Topics including ethical considerations in biomaterials research and the role of the FDA in medical device design are also presented. Prerequisite: ME 306, LEC

ME 770 Conductive Heat Transfer (3). The formulation of steady- and unsteady-state conduction heat transfer problems and their solution by analytical and numerical methods. Prerequisite: ME 612 or equivalent. LEC

ME 774 Radiative Heat Transfer (3). The formulation of steady and unsteady radiation heat transfer problems and their solution by analytical and numerical methods. Prerequisite: ME 612 or equivalent. LEC

ME 780 Kinematic Synthesis of Mechanisms (3). A study of methods of synthesis of mechanisms from kinematic specifications. Prerequisite: ME 520, LEC

ME 790 Special Topics: __________. (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 796 System Design and Analysis (3). Design and analysis of systems and components in individual and team projects. Engineering experience in planning, execution and reporting on selected practical engineering situations. Prerequisite: ME 628 or equivalent. LEC

ME 808 Advanced Microprocessor Applications (3). Advanced design and development of microprocessor based mechanical systems. Individual and team projects involving the development and integration of hardware and software into a “smart” system which includes the sensing, processing, and controlling functions are accomplished. Emphasis is on the use of the latest sensors and development tools. Prerequisite: Permission of instructor. LEC

ME 810 Advanced Fluid Mechanics (3). Topics include kinematic and dynamic behavior of fluids, derivation of Navier-Stokes equations, flow classification, solutions of viscous and inviscid flows for simple geometries, potential flow theory and laminar and turbulent boundary layer theory. Prerequisite: ME 510 or equivalent. LEC

ME 831 Convective Heat and Momentum Transfer (3). The formulation and solution of steady and unsteady convective heat, mass, and momentum transfer problems. Topics include boundary layers, duct flows, natural convection with and without phase change, development of analogies, transport properties, numerical methods. Prerequisite: ME 612 or equivalent. LEC

ME 832 Computational Fluid Dynamics and Heat Transfer (3). The fundamentals of the finite-difference method are presented and applied to the formulation of numerical models for heat and momentum transfer. The accuracy, stability, and computational efficiency of different algorithms are analyzed. Computer programs are developed for classical benchmark problems. Prerequisite: ME 508, ME 510, and ME 612 or equivalents. LEC

ME 840 Continuum Mechanics I (3). Principles of Continuum Mechanics for solids, fluids, and gases. Frames of references, measures of motion, deformation, strains, stresses, their rates, objectivity and invariance. Conservation laws, constitutive equations, equations of state and thermodynamic principles for developing mathematical models of continuum matter. Theoretical solutions of model problems. Corequisite: MATH 647 or ME 702, or permission of instructor. LEC

ME 841 Continuum Mechanics II (3). Fundamental principles of Continuum Plasticty, measures of plastic strains, stresses and constitutive equations for flow theory of plasticity. Internal variable theory of thermo-mechanical behaviors and thermodynamic of plasticity and viscoelasticity. Anisotropic plasticity, and advanced topics. Continuum mechanics principles for viscoelastic solids with emphasis on constitutive equations. Development of complete mathematical models and solutions of selected model problems. Prerequisite: ME 840 or equivalent. LEC

ME 854 Continuum Mechanics for Soft Tissues (3). An introductory course in the analysis of the mechanical behavior of materials modeled on the continuum assumption. The course will provide background on soft tissue properties and will focus on the tools necessary to model soft tissues, including the essential mathematics, stress principles, kinematics of deformation and motion, and viscoelasticity. Prerequisite: ME 311 or equivalent. LEC

ME 860 Advanced Mechanical Engineering Problems (1-3). An analytical or experimental study of problems or subjects of immediate interest to a student and faculty member and which is intended to develop students capability for independent research or application of new engineering science and technology. Maximum credit toward any degree is three hours unless waived in writing by the department chair. Prerequisite: Approval of instructor. RSH

ME 861 Theory of the Finite Element Method (3). Finite element method for solid mechanics, heat transfer, electromagnetics, and biomechanics. Theoretical and practical aspects of the modeling, implementation, and solution of problems. Prerequisite: ME 508 or equivalent. LEC

ME 862 Finite Element Method for Transient Analysis (3). Advanced treatment of dynamic and transient response for linear and nonlinear problems in solid mechanics. The course will provide background on finite element techniques. Prerequisite: ME 508 or equivalent. LEC

ME 864 Mesh Generation and Adaptivity for Finite Element Simulations in Engineering (3). The generation of Finite Element meshes in the analysis and simulation of engineering systems. Important topics are treated such as initial mesh generation and refinement (i.e. geometric modeling and mesh adaptivity or grading), choice of type of element, and assessment of solution accuracy (i.e. error estimation). Assignments include solving problems using FE software. Prerequisite: ME 661, ME 861, or equivalent. LEC

ME 882 Advanced Control Systems (3). Advanced methods in the modeling, analysis and design of linear and nonlinear control systems. Topics include but not limited to digital controls methods, energy-based modeling, and state-space methods. Prerequisite: ME 682. LEC

ME 890 Special Topics: __________. (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 989 Independent Investigation (1-6). An analytical or experimental investigation of an engineering problem requiring independent research. If the thesis option is selected six credit hours are required for the degree. If the project option is selected three credit hours are required for the degree. (See requirements for the Master of Science degree for additional details) THE

ME 901 Doctor of Engineering Internship (1-12). A twelve month internship in industries and government agencies working on projects of good industrial merit. The student is supervised by a preceptor at the internship site. Bimonthly progress reports are to be filed with the student’s advisory committee. One credit hour per month of internship. FLD

ME 961 Finite Element Method for Nonlinear Problems in Solid Mechanics (3). Advanced treatment of finite element techniques for structural analysis including material and geometric non-linearity as well as large strain deformation. Prerequisite: ME 861 or equivalent. LEC

ME 962 p-Approximation, Error Estimation, and Other Advanced Topics in the Finite Element Method (3). Advanced treatment of p-Approximation, error estimation, and other advanced topics in the finite element method. Prerequisite: ME 861 or equivalent. LEC

ME 965 Mathematical Modeling and Computational Method in Multi-Scale Processes (3). An overview of classical averaging and homogenization methods, as well as current multi-scale modeling techniques for the analysis of the micro- and nano-mechanics of materials. Models and numerical techniques are introduced based on continuum as well as particle descriptions. Assignments include the simulation of micro- and nano-mechanics problems by using existing finite element software and molecular dynamics packages. Prerequisite: ME 861 and ME 840. LEC

ME 990 Special Topics: __________. (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 999 Independent Investigation (1-16). An analytical or experimental investigation of an engineering problem requiring independent research. Twenty four hours as a minimum are awarded for the Ph.D. dissertation. An original contribution suitable for publication in a refereed journal is required of Ph.D. candidates. Twenty four credit hours as a minimum are awarded for the D.E. project. The D.E. candidate will have technical and supervisory responsibility for a multiperson project and a formal final project report suitable for publication is required. THE

Mechanical engineers apply their knowledge and techniques across a broad spectrum of industries and are sought by many professional firms.
William Allen White
School of Journalism & Mass Communications

Contents

Admission ............................................................ 150
Application Deadlines .......................................................... 150
Application Materials ........................................................... 150

News/Information & Strategic Communication—
Lawrence Campus ................................................ 150
Major Components of 36-Hour Requirement ........................... 150
Basic Skills Requirements ............................................................ 150
Core Course Requirements ......................................................... 150
Professional Course Requirements ............................................ 150
Advanced Course Requirements ................................................ 150
General Examination ................................................................. 151
Enrollment Requirements after Completing Course
Requirements ................................................................. 151

Joint M.S.J./J.D. Degree ......................................................... 151

Marketing Communications—
Edwards Campus ................................................ 151
Course Requirements .............................................................. 151
Core Course Requirements ...................................................... 151
Professional Course Requirements ........................................... 151
Final General Examination ...................................................... 151

Journalism & Mass Communications Courses ............ 151

Journalism classes have been taught at KU since 1903. The school has been accredited continuously since 1948 by the Accrediting Council on Education in Journalism and Mass Communications.

The William Allen White School of Journalism and Mass Communications is named for the famous Emporia editor whose career began at KU in the 1880s.

See pages 12-13 for admission procedures.
Admission

Admission is based primarily on the student’s undergraduate record, references, and results of the Graduate Record Examination. Applicants who have baccalaureate degrees in journalism, as well as those with no academic or professional background in journalism, are eligible to apply for the News/Information or Strategic Communication courses of study. Applicants who have had professional experience must describe it in their applications to be evaluated for exemption from basic skills and professional course requirements.

Applicants for the Marketing Communications course of study (Edwards Campus) must have a minimum of two years of professional experience in marketing communications or other media-related fields. It is offered on the KU Edwards Campus in Overland Park and is designed for part-time, evening study to accommodate working professionals.

Application Deadlines

Students may enter the News/Information, Marketing Communications, and Strategic Communication programs in fall or spring semesters. The application deadline for the fall, which begins in August, is the preceding February 1. The application deadline for the spring, which begins in January, is the preceding November 1.

Application Materials

Applications can be considered only after these items have been submitted:
1. Completed application form, online at www.graduate.ku.edu.
2. One official transcript of all college-level courses.
3. Scores on the Graduate Record Examination. Applicants for the Marketing Communications course of study may submit the Graduate Management Admission Test. Tests must have been taken within the last five years.
4. Three letters of reference from persons familiar with the applicant’s abilities (at least one academic reference preferred).
5. Written, 500-word statement of the applicant’s academic and professional objectives.
6. A current résumé. Applicants for the Marketing Communications course of study also must include three samples of professional work that reflects the applicant’s years of experience.
7. Nonrefundable application fee payable to the University of Kansas. See Admission in the General Information chapter of this catalog for more information.
8. International students whose native language is not English also must submit Test of English as a Foreign Language examination scores or International English Language Testing System examination scores.
9. International students must submit proof that they have the financial resources to cover annual expenses.

Submit your application online at www.graduate.ku.edu. Applicants to News/Information, Strategic Communication, and the M.S.J./J.D. program should send all test scores and original transcripts of all college and university course work to The University of Kansas School of Journalism and Mass Communications Graduate Director Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 203A Lawrence, KS 66045-7515

Applicants to the Marketing Communications course of study may send their test scores and original transcripts of all college and university course work to The University of Kansas Edwards Campus Marketing Communications Graduate Program Coordinator 12600 Quivira Road Overland Park, KS 66213-2402

News/Information and Strategic Communication—Lawrence Campus

To earn the degree, a student must complete 36 graduate credit hours with at least a B (3.0) average. A student without professional experience or an undergraduate degree in journalism and mass communications from an accredited program also must complete undergraduate basic skills courses. A student must elect to complete a thesis or project. Each student must pass a general examination.

Major Components of 36-Hour Requirement. A student entering the program must have basic journalism skills. The requirement may be fulfilled by professional experience or undergraduate course work. In addition, a student takes 12 hours of core courses, 15 hours of professional courses, and 9 hours of advanced courses, including a master’s project or thesis.

Basic Skills Requirements. Students may meet the basic skills requirement with significant professional experience or an undergraduate degree in journalism and mass communications from an accredited program. A student who does not meet the requirement must complete two undergraduate courses that do not count toward the 36-hour graduate credit requirement:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 419</td>
<td>Multimedia Editing</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 445</td>
<td>Multimedia Writing and Production</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Course Requirements. The core graduate courses help students develop strong research and critical-thinking skills. Four courses are required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 618</td>
<td>First Amendment and Society</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 801</td>
<td>Research I: Theory</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 802</td>
<td>Research II: Methods</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 803</td>
<td>Survey of Mass Media and Popular Culture</td>
<td>3</td>
</tr>
</tbody>
</table>

Professional Course Requirements. Those who hold the master’s degree from KU are expected to be able to perform professional tasks. Students therefore must complete a minimum of 15 credit hours of professionally oriented courses.
A student with significant professional experience may, as part of the application, request permission to substitute other course work for all or part of the professional course requirement. The application must include documentation of the student’s professional experience. At the point of admission, the graduate committee grants or denies requests to substitute other course work for the professional course requirement.

A student takes professional courses from among courses numbered JOUR 500 to JOUR 797, excluding JOUR 618 First Amendment and Society. These courses must include one course designated as advanced media or JOUR 676 Strategic Campaigns.

Up to 6 credit hours of professional courses may be completed outside the school, with the approval of the graduate committee.

Advanced Course Requirements. A student must complete 9 credit hours of advanced course work:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 840 Seminar in:</td>
<td></td>
</tr>
<tr>
<td>JOUR 898 Master’s Research</td>
<td></td>
</tr>
<tr>
<td>JOUR 899 Master’s Project/Thesis</td>
<td></td>
</tr>
</tbody>
</table>

General Examination. Each student must pass an oral or a written general examination during the semester of the student’s final enrollment in course work and when the thesis/project has been substantially completed. This examination must be completed before the project presentation or thesis defense. It is evaluated by an examination committee of three Graduate Faculty members, who serve on the project or thesis committee.

Enrollment Requirements after Completing Course Requirements. A student must enroll for at least 2 hours of credit each semester, excluding summer session, while working on the thesis or project. A student completing a thesis or project must be continuously enrolled, excluding summer session, until the thesis or project has been completed and approved. A maximum of 3 credit hours of JOUR 899 may be applied toward the 36 credit hours required for graduation. A student must complete the master’s degree program within seven years of admission.

Joint M.S.J./J.D. Degree

The joint M.S.J. and J.D. degree program combines into approximately three and one-half years of full-time study the Master of Science in journalism and the Juris Doctor programs offered by the School of Journalism and Mass Communications and the KU School of Law. The joint degree program offers students academic grounding in both disciplines to prepare them for the professional practice of journalism, law, or media law.

For more information, please contact the University of Kansas, Tom Volek, Associate Dean of Graduate Studies and Faculty Development, William Allen White School of Journalism and Mass Communications, Stauffer-Flint Hall, 1435 Jayhawk Blvd., Lawrence, KS 66045-7515, twvolek@ku.edu, www.journalism.ku.edu.

You may also contact the University of Kansas, School of Law, Green Hall, 1535 W. 15th St., Room 205, Lawrence, KS 66045-7577, (785) 864-4378, admitlaw@ku.edu, www.law.ku.edu.

---

Marketing Communications—Edwards Campus

The University of Kansas Edwards Campus
12600 Quivira Road, Overland Park, KS 66213-2402
www.marcomm.ku.edu, (913) 897-8416

Course Requirements

A student must complete 36 hours of credit with at least a B (3.0) average. A student takes 12 hours of core courses and 24 hours of professional courses. A student must complete the master’s degree program within seven years of admission.

Core Course Requirements (12 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 820 Marketing Fundamentals for Communicators</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 828 Financial Fundamentals for Communicators</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 829 Marketing Communications Research</td>
<td></td>
</tr>
<tr>
<td>JOUR 830 Capstone Course in Marketing Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

Professional Course Requirements. Those who hold the master’s degree from KU are expected to be able to perform professional tasks. Students therefore must complete a minimum of 24 credit hours of professionally-oriented courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 821 Integrated Marketing Communications and Sales Strategies</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 822 Database Development and Management</td>
<td></td>
</tr>
<tr>
<td>JOUR 823 Branding in Marketing Communications</td>
<td></td>
</tr>
<tr>
<td>JOUR 824 Creative Process</td>
<td></td>
</tr>
<tr>
<td>JOUR 825 Relationship Marketing</td>
<td></td>
</tr>
<tr>
<td>JOUR 826 Innovation in the Management of Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 827 Marketing Ethics</td>
<td></td>
</tr>
<tr>
<td>JOUR 831 Technologies in Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 832 Leadership and Management in Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 834 International and Multicultural Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 840 Seminar in:</td>
<td>(May be taken twice on different topics.)</td>
</tr>
</tbody>
</table>

Final General Examination. Each student must pass an oral or a written final general examination before graduating. This examination is administered during the semester of the student’s capstone course by the capstone course professor.

Any student who wants to take an elective course outside the school must have permission from the instructor of the course, the school offering the course, and the graduate director of the journalism school. The student should be prepared to indicate how the course contributes to the master’s program.

Journalism and Mass Communications Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 500 Topics in Journalism</td>
<td>(2-3)</td>
</tr>
<tr>
<td>JOUR 502 International Journalism</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 503 History of Journalism and Mass Communication</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 504 Professional Presentation Skills</td>
<td>(1)</td>
</tr>
<tr>
<td>JOUR 505 Professional Development</td>
<td>(1)</td>
</tr>
<tr>
<td>JOUR 506 Directed Studies in Journalism</td>
<td>(1-2)</td>
</tr>
<tr>
<td>JOUR 507 Practicum in Journalism (Academic)</td>
<td>(1-2)</td>
</tr>
<tr>
<td>JOUR 512 Principles of Broadcasting, Cable, and New Technologies</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 513 Principles of Advertising</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 523 Principles of Public Relations</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 527 Online Journalism</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 533 Case Studies in Strategic Communication</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 534 Diversity in Media</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 536 Documentary and Corporate Video</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 537 Case Studies in Editing</td>
<td>(3)</td>
</tr>
<tr>
<td>JOUR 538 International Marketing Communications</td>
<td>(3)</td>
</tr>
</tbody>
</table>

---

Professionals from all areas of journalism regularly visit KU. At right, Bobbi Bowman, diversity and membership director for the American Society of Newspaper Editors, speaks to a journalism class.

Application fees: Domestic students in journalism: paper $55, online $45.
International students in journalism: paper $60, online $55.
JOUR 540 Sports, Media, and Society (3).
JOUR 542 Magazine Publishing (3).
JOUR 552 Print and Online Design (3).
JOUR 553 Marketing Communication Production and Design (3).
JOUR 558 E-commerce and the Media (3).
JOUR 562 Publication Design and Production (3).
JOUR 568 Marketing and Media Research (3).
JOUR 572 Sales Strategy (3).
JOUR 574 Financial Basics for Communicators (3).
JOUR 600 School Journalism and Publications (3).
JOUR 608 Ethics and the Media (3).
JOUR 610 Advanced Photojournalism (3).
JOUR 618 First Amendment and Society (3).
JOUR 626 Long-Form Writing (3).
JOUR 636 Opinion and Commentary—Advanced Media (3).
JOUR 646 Depth Reporting—Advanced Media (3).
JOUR 667 Fieldwork in Magazines (3).
JOUR 676 Strategic Campaigns (4).
JOUR 680 Multimedia Management and Leadership (3).
JOUR 691 Community Journalism—Advanced Media (3).
JOUR 692 TV News I—Advanced Media (3).
JOUR 693 TV News II—Advanced Media (3).
JOUR 694 Online Writing, Design, and Production—Advanced Media (3).
JOUR 695 Newspaper Reporting—Advanced Media (3).
JOUR 696 Newspaper Online Editing—Advanced Media (3).
JOUR 697 Magazine Writing—Advanced Media (3).
JOUR 698 Media Sales (3).
JOUR 699 Reporting and Editing for Print and Online—Advanced Media (3).
JOUR 795 Current Issues in Marketing Communications (3).
JOUR 797 Special Projects in Marketing Communications (3). A student may complete a special project addressing a current issue in marketing communications. Departmental permission is required. LEC
JOUR 801 Research I: Theory (3). A comprehensive review of the theoretical and philosophical underpinnings of media research and practices. This seminar offers a range of perspectives and covers various interpretative, cultural, and critical approaches to understanding mass communication in various contexts. Each student drafts a literature review about a topic of the student’s choice. LEC
JOUR 802 Research II: Methods (3). An examination of the ethical and philosophical underpinnings of media research and practices. This seminar offers a range of perspectives and covers various interpretative, cultural, and critical approaches to understanding mass communication in various contexts. Each student drafts a literature review about a topic of the student’s choice. LEC
JOUR 819 Writing for Marketing Communications (3). A writing-intensive course focusing on articles and other works about marketing communication, management, general business and related subjects. Students read and discuss a core of designated work as well as works they select on their own. Students write reports, executive summaries and analytical briefings in which they synthesize these readings and apply marketing and management concepts to their own written work. LEC
JOUR 820 Marketing Fundamentals for Communicators (3). The course is designed to provide a fundamental understanding of marketing theory and process and how these theories relate to Integrated Marketing Communications. Specific focus will be spent on the marketing environment, the marketing mix, market segmentation, planning, execution and measurement. As part of the class, students will learn the components of a marketing plan and how to develop a plan based on specific quantifiable corporate objectives. LEC
JOUR 821 Integrated Strategies of Communications and Sales Strategies (3). The concept of integrated selling strategies and how these strategies logically lead to execution in various forms of message delivery systems. Through case studies of specific business cases, students develop insights into potential buyer segments and develop rationales for the most effective sales strategies for each buyer. Students not only offer solutions to cases but also explore ways to measure the impact of each technique and medium used. LEC
JOUR 822 Database Development and Management (3). A course in creating, updating, and effectively using databases in marketing communications, students learn the process of designing a database, what information to include and how to acquire information, and how to organize and execute marketing communications programs using a database. LEC
JOUR 823 Branding in Marketing Communications (3). Cases and topics in the development and execution of branding in marketing communications plans. The course emphasizes how organizations define actual brand problems and attempt to solve them. LEC
JOUR 824 Creative Process (3). An examination of the creative process and techniques of creative problem solving. The course gives students numerous opportunities to solve a variety of marketing communications problems. Students have an opportunity to visit with individuals who practice creativity in their professional life. Students work to create ideas as examples of the creativity as scholars. LEC
JOUR 825 Relationship Marketing (3). An exploration of the principles of relationship marketing and their application to marketing communications. Special emphasis is on the development of relationship messages, the use of databases for customer management, and a review of how databases are used in marketing communications media. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. LEC
JOUR 826 Innovation in Management of Communications (3). Students shall demonstrate their knowledge of Innovation Theory through papers, presentations and class participation. The class will emphasize understanding the changing media landscape. LEC
JOUR 829 Marketing Communications Research (3). Students learn how marketing and media research help determine the success of an organization’s marketing planning and strategic communications processes. Students study and conduct primary and secondary research - both qualitative and quantitative - including focus groups, ethnography and surveys. LEC
JOUR 831 Technologies in Marketing Communications (3). Explores new and emerging technologies and their impact on the delivery of marketing messages. Students will study podcasting, blogs, SMS text messaging, e-mail marketing, social networking, online video sites and other emerging technologies. LEC
JOUR 832 Leadership and Management in Marketing Communications (3). Ad- dresses the challenges faced by leaders and managers from the marketing communications perspective. These issues include a range of management and leadership concepts, such as organizational culture, organizational change, functions of management, leadership theory, power and influence, motivation, reinforcement and social responsibility. Discussions include the impact of digital media and the impact of the changing media landscape. LEC
JOUR 834 International and Multicultural Marketing Communications (3). Surveys the theory and professional practice of global and multicultural marketing communications. The course covers all major forms of cross-cultural marketing communications on an international and multicultural scale: mass media advertising, including the Internet; public relations; sales promotion, including point-of-purchase; direct and database marketing; partnerships marketing; personal selling and the sales force; and event marketing. Intra-country and global marketing communications by multinational organizations will be examined. LEC
JOUR 840 Seminar in: (1-3). Specialized work by qualified students under direction of the graduate faculty. Investigation and research studies. Prerequisite: Ten hours of graduate work in journalism. RSH
JOUR 849 Master’s Research (1-3). Specialized work by qualified students under direction of the graduate faculty. Investigation and research studies. Prerequisite: Satisfactory completion of JOUR 820, JOUR 821, JOUR 822, JOUR 823, and JOUR 824. LEC
JOUR 850 Capstone in Marketing Communications (3). The integrative capstone course examines the strategic roles of marketing communications elements such as advertising, promotion, public relations, sales promotion and sales management. Students will develop an integrated marketing communication plan as part of a semester-long case study. Through the project, students will demonstrate their knowledge of MC and will work with team members to either solve a marketing communication problem or pursue an opportunity by creating an integrated marketing communication proposal. Prerequisite: 30 hours. LEC
JOUR 898 Master’s Research (3). The student, with the guidance of a master’s project/thesis committee begins the research. Project are intended for a professional audience or professional media or clients and represent professional practice or performance. The thesis is intended for an academic audience, part of a master’s project which might be submission to a scholarly conference, journal, or publication. LEC
JOUR 899 Master’s Project/Thesis (3). The student, with the guidance of a master’s project/thesis committee completes execution of the project or thesis. In addition, the student completes the final, general examination and oral presenta- tion/defense of the project or thesis. Prerequisite: Satisfactory completion of JOUR 898, Master’s Research. THE
Requirements of the College .......................................................... 154
Nondegree-Seeking & Certificate-Seeking Students ...................... 154
Degree-Seeking Students .............................................................. 154
Enrollment (Degree, Nondegree, Certificate) ................................. 154
Academic & Research Integrity ....................................................... 155
Grading ..................................................................................... 155
Maximum Time to Submit Thesis or Dissertation ....................... 155
Master’s Degrees ................................................................. 156
Doctor of Philosophy Degree ...................................................... 156
KU Edwards Campus Graduate Programs .................................. 156
International Studies Centers ..................................................... 157
Majors ..................................................................................... 158
African & African-American Studies ............................................. 158
African & African-American Studies Courses ............................. 158
Haitian Courses ........................................................................ 161
American Studies ..................................................................... 161
American Studies Courses ....................................................... 162
Anthropology .......................................................................... 162
Anthropology Courses ............................................................. 163
Applied Behavioral Science ....................................................... 165
Bioinformatics .......................................................................... 172
Bioinformatics Courses ............................................................ 172
Biological Sciences: Ecology & Evolutionary Biology ................ 172
Biological Sciences: Molecular Biosciences .............................. 176
Biological Sciences Courses ..................................................... 177
Biology Courses ..................................................................... 177
Environmental Studies Courses ............................................... 181
Chemistry ............................................................................... 181
Chemistry Courses ................................................................... 182
Child Language ........................................................................ 184
Classics ................................................................................... 185
Classics Courses ...................................................................... 185
Greek Courses ........................................................................ 186
Latin Courses .......................................................................... 186
Clinical Child Psychology .......................................................... 186
Communication Studies ............................................................ 187
Communication Studies Courses ................................................. 188
Communicative Disorders: Intercampus Program ....................... 190
Speech-Language-Hearing Courses ........................................... 191
East Asian Languages & Cultures .............................................. 193
Chinese Courses ..................................................................... 194
East Asian Languages & Cultures Courses ............................... 194
Japanese Courses ................................................................... 195
Korean Courses ....................................................................... 195
Economics ............................................................................... 195
Economics Courses ................................................................. 196
English .................................................................................... 199
English Courses ...................................................................... 200
European Studies ................................................................... 201
European Studies Courses .......................................................... 201
French & Italian ...................................................................... 202
French Courses ....................................................................... 202
Italian Courses ....................................................................... 203
Genetics ................................................................................... 203
Geography ............................................................................... 203
Atmospheric Science Courses ................................................... 204
Geography Courses .................................................................. 205
Geology .................................................................................... 206
Geology Courses ..................................................................... 208
Germanic Languages & Literatures ............................................ 210
German Courses ..................................................................... 210
Scandinavian Courses .............................................................. 211
Gerontology ............................................................................. 212
Global Indigenous Nations Studies ......................................... 213
Global Indigenous Nations Studies Courses ............................... 214
History .................................................................................... 216
History Courses ...................................................................... 217
History of Art .......................................................................... 220
History of Art Courses ............................................................ 221
Humanities & Western Civilization .............................................. 222
Humanities & Western Civilization Courses ............................... 222
Peace & Conflict Studies Courses ............................................. 222
Interdisciplinary Studies ............................................................. 223
International Studies ................................................................ 223
International Studies Courses .................................................. 224
Latin American Area Studies ..................................................... 224
Latin American Area Studies Courses ........................................ 226
Liberal Arts & Sciences ............................................................. 227
Liberal Arts & Sciences Courses ............................................... 227
Linguistics .............................................................................. 227
Linguistics Courses ................................................................. 228
Mathematics ............................................................................ 229
Mathematics Courses ............................................................... 231
Museum Studies ...................................................................... 232
Museum Studies Courses .......................................................... 233
Philosophy ............................................................................... 234
Philosophy Courses ................................................................. 236
Physics & Astronomy ................................................................. 237
Astronomy Courses ................................................................. 239
Physics Courses ...................................................................... 239
Political Science ...................................................................... 241
Political Science Courses .......................................................... 242
Psychology .............................................................................. 245
Psychology Courses ................................................................. 248
Public Administration ............................................................... 253
Public Administration Courses ................................................... 255
Religious Studies ..................................................................... 257
Jewish Studies Courses ............................................................ 258
Religious Studies Courses ......................................................... 258
Russian, East European, & Eurasian Studies .............................. 259
Russian & East European Courses ............................................. 260
Slavic Languages & Literatures .................................................. 260
Bosnian/Croatian/Serbian Courses ........................................... 261
Czech Course ........................................................................... 261
Czech Language Courses .......................................................... 261
Polish Courses ........................................................................ 261
Russian Courses .................................................................... 261
Russian Language Courses ......................................................... 261
Slavic Languages & Literatures Courses ..................................... 261
Turkish Course ........................................................................ 262
Turkish Courses ...................................................................... 262
Ukrainian Courses ................................................................. 262
Sociology ............................................................................... 262
Sociology Courses ................................................................. 263
Slavic Languages & Literatures Courses ..................................... 265
Spanish & Portuguese ............................................................... 265
Portuguese Courses ................................................................. 265
Spanish Courses .................................................................... 266
Speech-Language-Hearing .......................................................... 267
Women, Gender, & Sexuality Studies ......................................... 267
Women, Gender, & Sexuality Studies Courses ............................. 268

See pages 12-13 for admission procedures.

Application fees: Domestic students in liberal arts and sciences: paper $55, online $45.
International students in liberal arts and sciences: paper $60, online $55.
Requirements of the College

Nondegree-Seeking and Certificate-Seeking Students

Under certain limited circumstances, students may enroll as nondegree-seeking graduate students. This status is best suited to students who plan to transfer graduate courses at KU to a degree program at another university. Students seeking certificates or participating in workshops also may need to use nondegree-seeking status. This status carries the following limitations, of which potential nondegree-seeking and certificate-seeking students should be aware:

- Admission to a degree program is not guaranteed.
- Student health insurance is not available.
- Federal financial aid is not available.
- Student loans may not be deferred.

Admission Process. An applicant may seek admission to a program or department. Check with departments and programs regarding the specific materials they require. The other materials below are required:

- Graduate application, online at www.graduate.ku.edu.
- Original transcript(s) of all college work (must show conferral of undergraduate degree).
- A $30 nonrefundable application fee payable to the University of Kansas.
- Permission of the graduate director of the department in which the course is offered.

Nondegree-Seeking Student Admission. Nondegree-seeking applicants must meet the admission standards for regular admission status. A nondegree-seeking applicant does not intend to work for an advanced degree or is working toward a graduate certificate. If a nondegree-seeking student later applies for admission as a regular degree-seeking student and is accepted by a department, the total of transfer credit may not exceed 6 hours, or 8 hours if the student holds a baccalaureate degree from KU (this total includes credit from other accredited graduate schools as well as nondegree credit earned at KU).

Nondegree-seeking applicants who do not meet regular admission standards must be admitted under provisional status. Applicants who wish to attend institutes or workshops may be admitted through the Easy Admit process. This allows any person with a baccalaureate degree from an accredited institution to take one course a semester, without meeting the additional requirements for regular nondegree-seeking admission. Please note, current degree-seeking graduate students who wish to pursue a graduate certificate are not required to apply for nondegree-seeking status. See Graduate Certificate Programs in the General Information chapter of this catalog for more information.

Probation/Dismissal Policy for Graduate Nondegree-Seeking and Certificate-Seeking Students. If a graduate nondegree-seeking or certificate-seeking student has a cumulative grade-point average below 3.0, the student receives a warning letter stating that the student’s cumulative grade-point average must rise to 3.0 or above in the next academic semester or the student will be dismissed.

Degree-Seeking Students

Admission. A nonrefundable application fee payable to the University of Kansas is required. See Admission in the General Information chapter of this catalog.

To be admitted, a student must have a baccalaureate degree from an accredited institution or the equivalent from a university abroad. Requests for exemption from this regulation must be forwarded with departmental and CLAS endorsement to the dean of Graduate Studies.

Admission is denied if an applicant’s bachelor’s degree contains a significant amount of credit awarded for work experience that was not supervised by a faculty member of an accredited institution (life experience) or not evaluated in units that identify the academic content (e.g., P/F, S/U).

Some departments or programs may admit students who do not meet the minimum grade-point average requirements. These students are admitted provisionally. The requirements for achieving good standing as a graduate student are specified in the letter of admission. Generally, earning a grade-point average of 3.0 in the first semester of enrollment is sufficient to achieve good standing. In some cases, passing certain required courses with a minimum grade or meeting specific competencies by a set time also may be required.

Deadline Dates for the Issuance of I-20’s to International Students Still in Their Home Countries. Completed international applications (admitted by the department with complete financial and English information) are processed and the appropriate visa form (I-20 or IAP-66) sent to students if applications are received by:

- November 15—any spring semester
- April 15—any summer session
- June 15—any fall semester

Students whose applications are received after these dates are granted admission for the following semester. Exceptions are handled individually.

Enrollment (Degree, Nondegree, Certificate)

Nine credit hours in fall or spring semester and 6 hours in summer session constitute full-time enrollment in graduate study. Maximum enrollment for graduate students, except in rare instances, is 16 hours in fall or spring semester and 9 hours in summer session. The enrollment of a student who is working full time on a dissertation must reflect that fact.
Certificate students may have different course-load requirements. Check with an appropriate adviser.

Generally, no student is accepted and allowed to enroll after the first four weeks of a semester or the first two weeks of a summer session.

Dual Enrollments. Students enrolled in two schools or working on two degrees at the same time must complete the work for both degrees. No courses count toward both degrees, except in the joint degree programs that have been established (e.g., M.P.A./J.D., M.A. Econ./J.D., M.B.A./M.A. in Area Studies, etc.). See also Master’s Degrees, Combined Master’s Degrees in the General Information chapter of this catalog.

Failure to Enroll. All graduate students are expected to enroll in the spring and fall semesters while completing the credit hours required for the fulfillment of their degrees. Furthermore, toward the end of the degree programs, many students are required to be enrolled in the summer session as well. See specific continuous enrollment requirements in the Master’s Degree and Doctor of Philosophy Degree sections, as well as in individual academic units’ handbooks. If a student fails to enroll as required, she or he must either petition CLAS for a leave of absence or submit a resignation form to voluntarily resign from his or her graduate program indefinitely.

When a leave of absence is granted, a place in the graduate program is held, and the duration of the requested leave (one calendar year or less) is added to the time limit for the student to complete the program requirements (see program time constraints). When a student voluntarily resigns from a graduate program, a place in the program is not held, and the student must apply to the program to be reactivated and given a new place before his or her subsequent return to KU. If the student opts to return to the same graduate program and the academic unit accepts the student, the duration for which the student was resigned from the program is added to the time limit for the student to complete the program requirements.

Students who fail to enroll as specified above, or who have not voluntarily resigned or been given a leave of absence from the graduate program, are reviewed by the College Office of Graduate Affairs and the students’ academic units for possible dismissal. Because failure to make satisfactory progress toward the degree is cause for dismissal, students should stay in contact with their academic advisers and departments to ensure they are meeting program requirements.

If a student voluntarily resigns from a CLAS graduate program, she or he is eligible to be readmitted to KU as a graduate student in another department in the College of Liberal Arts and Sciences through the regular application and admission process.

International Students. International students who do not pass the Applied English Center examination or receive a waiver from the Applied English Center are not granted graduate degrees. Such students must pass the courses required of them by the Applied English Center before being allowed to enroll for graduate credit.

Academic and Research Integrity

The College of Liberal Arts and Sciences strictly enforces KU and CLAS policies on academic and scholarly misconduct. Academic integrity requires honest performance of academic and research responsibilities by students. These include, but are not limited to, ethical preparation of assignments, reports, and research papers; completion of examinations; ethical treatment of human and animal subjects; execution of administrative requirements; and a sincere and conscientious effort by students to abide by the policies set forth by instructors and research advisers.

Grading

The +/- grading system is used in the College of Liberal Arts and Sciences; the plus or minus describes intermediate levels of performance between a maximum of A and a minimum of F. Intermediate grades represented by plus or minus are calculated as 0.3 units above or below the corresponding letter grade. The Credit/No Credit system is not used for graduate courses in the College. All other grading policies for students enrolled in CLAS graduate courses are outlined in Article II of the University Senate Rules and Regulations (https://documents.ku.edu/policies/governance/LISRR.htm).

Probation and Dismissal Guidelines. To be in good standing, a student must maintain a 3.0 cumulative grade-point average; if the grade-point average falls below 3.0, the department is notified that the student should be placed on probation. This action is followed by a letter to the student confirming the probation and explaining the student’s options.

Usually a student is placed on probation for one academic semester. If the cumulative grade-point average has not risen to 3.0 at this point, the student can either be dismissed or be allowed to continue on probation, depending on the department’s decision.

If a student has a dangerously low grade-point average and is in jeopardy of never graduating, the department must write a letter explaining why the student should be allowed to continue.

A graduate student can be dismissed upon recommendation of the student’s department. Academic dismissal should occur before a semester begins; but if a student is dismissed during the semester, the dismissal is effective only at the end of the semester in which the department gives notification of dismissal. The student is notified of dismissal. Usually a graduate student is dismissed because of a low grade-point average; however, failure of examinations or failure to make satisfactory progress toward the degree are also cause for dismissal.

If a department dismisses a student, he or she cannot be admitted as a graduate student in any department in the College of Liberal Arts and Sciences.

Maximum Time to Submit Thesis or Dissertation

From the final presentation and/or defense of the thesis or dissertation work to a student’s adviser and/or committee members, a period of six months is allowed for students to make revisions and to file the final version of the manuscript. During this time, the student must be enrolled in at least 1 hour of dissertation credit (or more if required by the academic unit). Students who do not file the final manuscript within the six-month time limit must enroll in 3 hours a semester until the thesis or dissertation is completed and filed.

Each student is responsible for conforming with the regulations in this catalog and any others that may be required. See Student Responsibilities on page 26 for more information.

The student is subject to the regulations in force at the time of admission.
Master’s Degrees

Students have a total of seven calendar years, barring any periods of absence due to approved leaves of absence or temporary resignation from a program, in which to complete the work for a master’s degree. See also Master’s Degree Requirements, Program Time Constraints in the General Information chapter of this catalog. Departments may have stricter time limits. See your academic unit’s handbook for program-specific information, requirements, and restrictions.

Continuous Enrollment for Master’s Students. All master’s students who have completed the required course work for their degrees must be continuously enrolled in the spring and fall semesters until all requirements for the degree are completed. No enrollment is required during the summer session unless it is the semester during which the student will graduate, in which case enrollment is required. However, certain academic units have rules governing summer enrollment. The number of hours of enrollment is determined by the student’s degree program.

All materials relative to completion of a master’s degree—electronically submitted thesis and associated fees, signed title and acceptance pages, results of the final oral examination, etc.—must be received by the end of the first two weeks of a semester or the first week of summer session if the student does not plan to enroll.

Final Examination. A final general examination in the major subject is required. The examination is held during the semester of the student’s final enrollment in course work and, in the case of thesis programs, when the thesis has been substantially completed. In thesis programs, an oral thesis defense may be one of the degree requirements. Such a defense may be offered in addition to, or in conjunction with, the required general examination in the major field. Students earning a master’s degree must have completed at least 1 hour of thesis enrollment before the master’s degree can be awarded. See also Master’s Degree Requirements, M.A. and M.S. Degrees, in the General Information chapter of this catalog.

Thesis. General rules for the preparation of a thesis are available online at www.graduate.ku.edu.

Doctor of Philosophy Degree

A total of 10 calendar years, barring any periods of absence due to approved leaves of absence or temporary resignation from a program, is allowed to complete both the master’s and the Ph.D. If the student enters with a master’s degree, a total of eight years is allowed. Up to a one-year time extension is typically granted, on the written advice of the dissertation committee and the graduate director or adviser of the department or program. The only exceptions to the enforcement of the one-year extension rule occur if the student is making progress and if the department shows strong support.

Several departments have set their own, stricter time limits. Students are required to review graduate program handbooks for program specific limits.

A student must fulfill the equivalent of three years of full-time academic study in completing the requirements for the doctorate, including the time spent attaining the master’s degree. Resident study at less than full time requires a correspondingly longer period to complete the requirements. See also Doctoral Degree Requirements, Doctor of Philosophy in the General Information chapter of this catalog.

Research Skills. When a student meets the research skills requirement for the Ph.D. degree, notice must be submitted on the appropriate form. The skill should be described in words; a list of course numbers or titles is not acceptable. The research skill must be completed before the oral comprehensive examination can be taken.

Residence Requirement. The doctoral residence requirement should be fulfilled before the comprehensive oral examination is scheduled.

Comprehensive Oral Examination. This examination covers the major field and any outside work for which the academic unit wishes to hold the student responsible. The examination is expected to be broader than a mere defense of the dissertation proposal. See also Doctoral Degree Requirements, Doctor of Philosophy in the General Information chapter. The student must take the oral comprehensive examination for the Ph.D. degree before the first day of finals if the hours in which the student is enrolled at the time are to count toward the 18 post-comprehensive enrollment hours described under Doctoral Degree Requirements, Doctor of Philosophy, Candidacy in the General Information chapter. It may be necessary for a student to revalidate or retake the oral comprehensive if he or she took the examination more than five years before an extension of time request.

Dissertation. Rules for preparing the final copies of the dissertation are available online at www.graduate.ku.edu. All materials relative to the completion of a doctoral degree—electronically submitted dissertation and associated fees, signed title and acceptance pages, results of the final oral examination, etc.—must be received by the end of the first two weeks of a semester or the first week of summer session, if the student does not plan to enroll in dissertation hours.

KU Edwards Campus Graduate Programs

Students who would like to complete a graduate degree in the Kansas City area may choose from three CLAS graduate programs offered on KU’s Edwards Campus in Overland Park. Online information about program requirements, facilities, tuition, and fees is available at http://edwardsampus.ku.edu or www.iwentback.com. Residents of Kansas City metro area counties admitted as degree-seeking students to one of these programs may qualify for the MetroKC tuition rate for Edwards Campus courses. For more information, contact the CLAS graduate adviser at the Edwards Campus by calling 4-8510 from the Lawrence campus or (913) 897-8510 from an off-campus phone.

Communication Studies. The Master of Arts degree is offered on the Edwards Campus (the Ph.D. is offered only in Lawrence). See requirements in this chapter of the catalog.

International Studies. The Master of Arts degree is offered on the Edwards Campus. See requirements in this chapter of the catalog.

Public Administration. The Master of Arts degree is offered on the Edwards Campus (the Ph.D. is offered only in Lawrence). See requirements in this chapter of the catalog.

KU’s centers for African studies; East Asian studies; and Russian, East European, and Eurasian studies are U.S. Department of Education national resource centers.

Permanent exhibits are open in KU’s Natural History Museum and in Spencer Museum of Art.
International Studies Centers

Center for Global and International Studies
Interim Director: William Tsutsui
Strong Hall, 1450 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7518
www.global.ku.edu, (785) 864-3661

The Center for Global and International Studies supports and promotes global and international studies at KU. In collaboration with International Programs, CGIS works to provide a single point of contact for faculty with international expertise to help facilitate interdisciplinary research and teaching opportunities. Building on longstanding institutional strength in international studies, the center focuses on topics and themes of transnational scope and on world areas of economic and strategic importance not covered by the existing area studies centers. CGIS contributes to the preparation of students for careers in an increasingly interconnected world by housing undergraduate and graduate degrees in global and international studies, and by supporting the introduction of new course offerings and study abroad opportunities. In addition, the center offers outreach activities to K-12 teachers, businesses, and governmental agencies across the region and serves as a resource for the local and international community.

Kansas African Studies Center
Director: Garth A. Myers, kasc@ku.edu
Associate Director: Jane Irungu, (785) 864-1064
Bailey Hall, 1440 Jayhawk Blvd., Room 10
Lawrence, KS 66045-7545
www.kasc.ku.edu, (785) 864-3745, fax: (785) 864-5330

The Kansas African Studies Center is a comprehensive National Resource Center funded by Title VI of the U.S. Higher Education Act for the study of Africa. It coordinates and develops the interdisciplinary interests of Africanists at KU and promotes the study and understanding of Africa in the university, the state, and the region. It sponsors research, enhances curricular, organizes conferences, promotes special projects, acquires library and related resources, conducts outreach programs, and seeks grants and special funding to make these activities possible.

Center for East Asian Studies
Director: Megan Greene
Bailey Hall, 1440 Jayhawk Blvd., Room 210
Lawrence, KS 66045-7545
www.ceas.ku.edu, (785) 864-3849, fax: (785) 864-5034

The Center for East Asian Studies is a National Resource Center funded by the U.S. Department of Education. CEAS promotes East Asian language and area studies; coordinates interdisciplinary activities; works with the East Asian Library; advises students in East Asian studies; awards Foreign Language and Area Studies Fellowships in Chinese, Japanese, Korean, Uyghur, and Tibetan; and arranges special events related to East Asia on campus. CEAS also offers outreach to schools, businesses, and the community and serves as a regional resource for information about East Asia.

Center for European Studies
Director: Diane Fourny
Bailey Hall, 1440 Jayhawk Blvd., Room 308
Lawrence, KS 66045-7545, www2.ku.edu/~ces, (785) 864-9070

The Center for European Studies facilitates the interdisciplinary study of Western Europe through teaching, scholarship, study abroad, and international exchanges. It promotes a better understanding of European-American relations and the impact of European integration on EU member states and their European partners and a deeper appreciation of the societies and peoples of this area. More than 80 faculty members who specialize in some aspect of European studies—including European history, architecture, French and Italian literatures and cultures, art history, Germanic languages and literatures, legal history and comparative law, Spanish and Portuguese languages and literatures, international relations, political science, and international business—contribute to programs, conferences, conference series, outreach, and exchanges dealing with the European community.

Center of Latin American Studies
Director: Elizabeth Kuznesof
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7545
www2.ku.edu/~latamst, (785) 864-4213, fax: (785) 864-3800

The nationally recognized Center of Latin American Studies promotes interdisciplinary study of Latin America and its languages through teaching, scholarship, outreach, study abroad, and international exchanges. It administers bachelor’s and master’s degree programs and graduate certificate programs in Central American and Mexican Studies and Brazilian Studies. Areas of particular strength are Central America, Mexico, Brazil, and Paraguay. Languages include Spanish, Portuguese, Kachiquel Maya, Quichua, and Haitian Creole. The center coordinates Latin American events on campus including lectures, films, exhibits, and theatrical performances. Exchanges and study abroad programs have been developed in Costa Rica, Mexico, Peru, and Brazil. The center offers outreach to schools, businesses, and the community and serves as a resource for the state, the region, and the nation.

Center for Russian, East European, and Eurasian Studies
Director: Edith Clowes
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7545
www.crees.ku.edu, (785) 864-4236, fax: (785) 864-3800

The Center for Russian, East European, and Eurasian Studies is one of 16 comprehensive National Resource Centers funded by Title VI of the U.S. Higher Education Act for the study of Russia, Ukraine, Central Asia, East Central Europe, and the Balkans. It promotes language and area study in an integrated, interdisciplinary framework and in traditional academic disciplines. Languages taught include Russian, Ukrainian, Polish, Czech, Bosnian/Croatian/Serbian, Slovenian, Turkish, and Yiddish. The center administers B.A. co-major and M.A. degree programs in Russian, East European, and Eurasian studies and supports study abroad in Russia, Poland, Croatia, and Ukraine. Each year, visiting scholars from the region join KU’s 50 area faculty members in exchange, instructional, and research activities. The center also coordinates and sponsors conferences, lectures, theatre, and outreach activities of interest to KU students, faculty members, K-12 teachers, and the community. It serves as a resource to the state, the Great Plains, and the nation.
African & African American Studies

MAJORS

African and African-American Studies
Chair: Peter Ukpokodu, afs@ku.edu
Graduate Adviser: Shawn Alexander
Bailey Hall, 1440 Jayhawk Blvd., Room 9
Lawrence, KS 66045-7545
www.ku.edu/~afs, (785) 864-3054, fax: (785) 864-5330
Professors: Mack, Myers, Ukpokodu
Professors Emeriti: Drayton, Freeman
Associate Professors: Bolden, Jelks, MacGonagle, Omar, Pennington
Associate Professor Emeritus: Gordon
Assistant Professors: Alexander, Hannoun, Salami

The Department of African and African-American Studies focuses on the study of Africa, African America, and the Afro-Caribbean. The department offers an M.A. in African and African-American studies and an African studies certificate program. Graduate courses are also available to students working toward interdisciplinary advanced degrees in participating disciplines or other departments and programs. Fifty faculty members affiliated with the department facilitate the offering of interdisciplinary graduate degrees in the arts, humanities, and social sciences.

The M.A. program produces scholars, teachers, and other professionals who have the intellectual and scholarly capacity to make ongoing contributions to the world in which they live. The graduate program encourages students to adopt a critical perspective requiring an integrative approach to the study of the arts, humanities, and social sciences that does not abstract them from their political and social contexts but rather relocates them within the social and political contexts out of which they have developed. Students must focus not only on the experiences of Africans and African Americans, but also on the connections of those experiences to the cultural, political, and economic forces of the larger world to which Africans and African Americans have been and are inextricably linked. The department accommodates a variety of individual academic objectives under the umbrella of Africa and its diaspora, but students must demonstrate academic coherence in their plans.

Admission

Admission is based primarily on the applicant’s undergraduate and/or graduate record, statement of academic objectives or purpose, and academic references from individuals familiar with the applicant’s work. Completion of a bachelor’s degree is required, preferably in the arts, social sciences, or humanities with a demonstrated interest in African or African-American studies. Prospective students must take the Graduate Record Examination and have the results forwarded to the Graduate Application Processing Center.

Submit your application online at www.gradu ate.ku.edu.

Send all other requested application materials to

The University of Kansas
Department of African and African-American Studies,
Graduate Applications
Bailey Hall, 1440 Jayhawk Blvd., Room 9
Lawrence, KS 66045-7545

M.A. Degree Requirements

The African and African-American studies M.A. program takes two years of full-time study. Nine upper-division and graduate courses, in addition to a thesis or additional course work for a nonthesis option, are required for the degree—a total of 33 credit hours. There are four core courses, AAAS 801 Introduction to Africana Studies I: African-American; AAAS 802 Introduction to Africana Studies II: African; AAAS 803 Research Methods in Africana Studies; and AAAS 804 Seminar in Africana Studies. Students then choose five courses (15 credit hours) in their areas of specialization. Students may take 6 credit hours outside the department in related course offerings including among others American studies; anthropology; art; communication studies; economics; education; English; film and media studies; geography; history; philosophy; political science; religion; sociology; theatre; and women, gender, and sexuality studies.

Research Skills

1. A master’s degree in African and African-American studies with an African studies concentration requires proficiency in an African language. Proficiency may be fulfilled by one of the following:

   (a) Completing two years of college-level study at KU, at an equivalent institution, or through an intensive course. Language courses offered on a regular basis at KU that count toward proficiency are Amharic, Arabic, Hausa, Kikwahili, and Wolof. Proficiency also may be fulfilled by studying, on a self-instructional basis, any one of a number of African languages for which the Kansas African Studies Center has pedagogical materials and proficiency-testing capabilities.

   (b) The equivalent of two years of an approved language.

   (c) Proof that the student is a native speaker of an African language.

2. A master’s degree in African and African-American studies with an African-American Studies concentration requires that a student

   (a) Fulfill the African language requirement outlined above, or

   (b) Fulfill a non-African language requirement employing standards comparable to those governing the African language requirement outlined above, or

   (c) Demonstrate competence in a research skill relevant to the student’s specific concentration in African-American studies. Competence in a research skill is certified by the department’s graduate studies director.

In consultation with their advisers and to the satisfaction of the department, students must demonstrate that their choice of a language or research skill is appropriate for their specific research interest in the field of African-American studies.

Handbook for Graduate Students

Detailed information, application deadlines, and general information may be found in The M.A. Program in AAAS, available on request from the department.

African and African-American Studies Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAAS 501</td>
<td>Regional History: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 502</td>
<td>Directed Language Study: _____</td>
<td>(5)</td>
</tr>
<tr>
<td>AAAS 503</td>
<td>Directed Language Study: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 504</td>
<td>Directed Language Study I: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 505</td>
<td>Directed Language Study II: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 510</td>
<td>Comparative Racial and Ethnic Relations</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 511</td>
<td>The Civil Rights Movement</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 512</td>
<td>African and Western Cosmologies</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 520</td>
<td>African Studies: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 522</td>
<td>African and African-American Religion: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 523</td>
<td>African-American Studies: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 525</td>
<td>Social History of Black Aging in America</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 527</td>
<td>Popular Culture in Africa</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 532</td>
<td>Studies in Islam</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 534</td>
<td>The Rhetoric of Black Americans</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 542</td>
<td>The History of Islam in Africa</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 543</td>
<td>Language and Culture in Arabic-Speaking Communities</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 545</td>
<td>Unveiling the Veil</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 550</td>
<td>Senior Seminar: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 551</td>
<td>Environmental Issues in Africa</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 552</td>
<td>Classical Islamic Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 553</td>
<td>Geography of African Development</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 554</td>
<td>Contemporary Health Issues in Africa</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 555</td>
<td>African Film and Video</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 557</td>
<td>Cities and Development</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 560</td>
<td>Race, Gender, and Post-Colonial Discourses</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 561</td>
<td>Liberation in Southern Africa</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 565</td>
<td>Gender, Culture, and Migration</td>
<td>(3)</td>
</tr>
<tr>
<td>AAAS 568</td>
<td>Kongo Trans-Atlantic</td>
<td>(3)</td>
</tr>
</tbody>
</table>
AAAS 574 Slavery in the New World (3).
AAAS 578 Central African Art (3). NW
AAAS 584 Black American Literature (3).
AAAS 585 Race and the American Theatre (3).
AAAS 590 The Rise and Fall of Apartheid (3).
AAAS 598 Sexuality and Gender in African History (3). NW
AAAS 600 Politics in Africa (3). NW
AAAS 602 U.S. Policy - Post Colonial World (3).
AAAS 611 History of the Black Power Movement (3).
AAAS 630 The Life and Intellectual Thought of W.E.B. Du Bois (3).
AAAS 650 Sufism (3). NW
AAAS 657 Gender in Islam and Society (3). NW
AAAS 662 Gender and Politics in Africa (3).
AAAS 663 The Anthropology of Islam (3). NW
AAAS 676 West African Art (3). NW
AAAS 677 African Design (3). NW
AAAS 679 African Expressive Culture: _____ (3). NW
AAAS 680 Introduction to Modern Africa (3).
AAAS 690 Investigation and Conference (1-3).
AAAS 695 Honors Project in: ___ (3).
AAAS 700 Africa in World Politics (3). A 20th-century and 21st-century study of the continent is a framework that precipitated the rise of Africa, the major African issues in international relations, and Africans impact on the modern world. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 701 Politics in Africa (3). A survey of politics in Africa, focused on the countries of sub-Saharan or Black Africa. The course includes a historical discussion of precolonial Africa, colonization and the creation of contemporary states, and the politics of independence, before examining contemporary political systems and the forces influencing patterns of politics on the continent. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 715 Seminar in African Art (3). A concentrated study of a special topic relating to African Art studies. Different topics are offered in different semesters. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. (Same as HA 715.) Pre-requisite: Nine hours of Art History and/or consent of instructor. LEC
AAAS 716 Women in Islam (3). Addresses the widely held stereotype of Muslim women as pawns in a patriarchal socio-religious context. Investigating the Muslim cultures of certain regions, the course will examine the manner in which indigenous culture was influenced by the introduction of Islam and the historical impact of Islam on women's social roles. Focusing principally on contemporary social change, the course will consider how socio-political change affects religious roles where religion is integrally involved in daily life. To what extent is individualism valued, and how are the pressures of late 20th-century and early 21st-century life mediated? The course will draw on tests from history, sociology, and literature. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 720 Intercultural Communication: The Afro-American (3). An examination of the barriers to effective communication between Black Americans and non-Black Americans. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 723 Special Topics in African Studies: _____ (3). Seminar in an area of current interest in African and African-American Studies. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. SEM
AAAS 730 Black Leadership (3). The course focuses on the concept of leadership and on Black leadership in the United States. An in-depth analysis of selected case studies of Black leaders both historical and contemporary. Some attention will be given to the dispersion of Africans into the Americas and the leadership that emerged, conditioned both by environmental factors and the psychology engendered by the system of slavery. Selected successful Black leaders will be invited to visit the class from time to time. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 731 African Literature (3). An introduction to African Literature. Reading, analysis, and discussion of contemporary fiction, poetry, and drama from sub-Saharan Africa. Brief attention will be paid to historical development and to traditional literature. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 732 Francophone African Literature (3). This course is an introduction to 20th-century and modern Francophone African literature covering selected works by major authors from both sub-Saharan Africa and the Maghreb. Attention will be given primarily to the novel, although some poetry will also be read. Topics and themes include neocolonialism, African identity in the wake of colonialism, Islam, and women's writing. Classes will be conducted in English. Students may read the texts in French or in translation. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 733 Islamic Literature (3). Contemporary literature that is set in the context of Muslim cultures provides for an examination of Muslim identity on its own terms. This course focuses on the literary examination of works by Muslim authors from Egypt, Sudan, Senegal, Guinea, Mali, Morocco, Nigeria, and Niger. From the perspective of both male and female authors, the issue of what it means to be a Muslim is considered through fictional accounts set in contemporary contexts. Some works will be read in translation from Arabic or French; others are written originally in English. Cultures considered in this course vary widely in their origins and customs, which allows for a focus on the one pervasive element they share in common: Islam as it shapes peoples lives. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 734 African Women Writers (3). This course focuses on African women writers from all regions of the continent. Works included deal with a wide variety of issues relevant to African women, as well as universal issues of conceptions of gender roles, and the struggle to attain personal rights and freedom within traditional cultural frameworks. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 735 Muslim Women's Autobiography (3). This course examines the realities of Muslim women's experiences as conveyed in their own voices. Works are drawn from all over the world, from Africa and the Middle East to Europe and the U.S. and cover from the 19th-century to the present. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 740 The Afro-American Family: A Psychological Approach (3). The examination of the structure, values, and behavior patterns of the contemporary African-American family as influenced by African cultures and kinship systems and the institution of slavery in association with other factors. Social and psychological forces that have enhanced or blocked family survival, stability, and advancement will be explored. The orientation of Black family life will emphasize its strengths, weaknesses, adaptations, strong kinship bonds, and equitable family roles. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 745 Arab Thought and Identity (3). The intention of this course is to present a comprehensive portrait and a deeper understanding of the Arab society and its cultural background. We will focus on the debate that is still raging about traditionalism versus modernity, and authenticity (assala) and specificity (Khususiyya) versus westernization. Moreover, we will discuss the question of Arab identity which manifests itself through a sense of belonging and diversity of affiliations, and relies well on shared culture and its variations, and shared place in history and common experiences. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 746 Women in Islam (3). Islam's prophet Muhammad, the Holy Koran, religious symbols and moral mandates, and historical developments. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 750 Popular Culture in the Muslim World (3). A study of pop songs, televi- sion sitcoms, and other popular music and cultural forms in different parts of the Muslim world, with attention to Muslim's sense of humor, tragedy, aesthetics, and pertinent issues of the day. LEC
AAAS 760 Topics and Problems in African and African-American Studies (3). Individual investigation of special topics in African and African-American studies. May not be repeated for credit. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
AAAS 774 Topics in Literature of Africa and the African Diaspora: _____ (3). An intensive study of the literatures of Africa and/or African diaspora (people of African descent dispersed around the world). This study will focus on the major characteristics of a particular period, genre, mode, and/or theme in literatures such as African, Caribbean, Afro-Brazilian, African American, African Canadian, Black British. Critical theories pertinent to writers and their work will be covered. Topics may include studies in drama, poetry, or the novel; migration narratives; literature of a particular era, such as the Harlem Renaissance, Negritude, or the Black Arts Movement; representations of gender, etc. As topics change per semester, the course may be repeated for credit. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

The Kansas African Studies Center coordinates and develops the interdisciplinary interests of Africanists at KU and promotes the study and understanding of Africa in the university, the state, and the region.
required for students in this course beyond lower-level courses of the same name and/or description. (Same as ENGL 774.) LEC

AAAS 804 Seminar in Africana Studies (3). An interdisciplinary, comparative exploration of the histories, cultures, and societies of Africa. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 810 Introduction to African-American Studies (3). An introduction to the role of Black women in our society, from the African background through the plantation experience to the present. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 801 Introduction to African-American Studies: African-American (3). An introduction to, and overview of, the historical, intellectual, and professional foundations of African-American Studies; a multidisciplinary examination of the key texts and issues in the field. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 802 Introduction to African-American Studies: African (3). An introduction to, and overview of, the historical, intellectual, and professional foundations of African Studies; a multidisciplinary examination of the key texts and issues in the field. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 803 Research Methods in African Studies (3). A multidisciplinary introduction to the range of research methods employed to examine African and African-American history, cultures, and societies. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 804 Seminar in Africana Studies (3). An interdisciplinary, comparative exploration of the histories, cultures, and societies of Africa. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 811 The Civil Rights Movement in America (3). An examination of the major Civil Rights organizations, Civil Rights legislation and its impact on American life, and conflicts between integrationist and separatist forces in politics, economics, education, culture and race relations in the United States. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 812 The Black Power Movement (3). This course will examine the Black Power Movement in its many manifestations, beginning with a discussion of its political and cultural background: the transition from Civil Rights to Black Power in the Afro-American freedom movement of 1960’s; the impact on African Americans of African decolonization and the spread of anti-colonial and anti-imperialist movements throughout other parts of the globe. There will also be some examination of the Black Arts Movement and its influence on the Black Power Movement and vice versa. Therefore, some attention will also be paid to the music, literature, theater, and the graphic arts of the period, and the aesthetic and political critiques of these artistic forms. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 813 African and African-American Religion (3). An examination of the representation(s) of race in the American theater analyzed according to major autobiographical, poetic, and fictional works. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 814 African Film and Video (3). A critical study of Africa and its peoples as depicted in films and videos. The aesthetic, cultural, economic, political, historical, and ideological aspects of African films and videos will be examined. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 815 African Film and Video (3). A critical study of Africa and its peoples as depicted in films and videos. The aesthetic, cultural, economic, political, historical, and ideological aspects of African films and videos will be examined. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 816 African and African-American History (3). Historical development, systematic ideas and rites of selected periods, cultural settings, and movements. Advanced level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 817 Life and Times of W.E.B. Du Bois (3). A critical examination of the life and thought of W.E.B Du Bois, paramount black scholar and activist whose massive body of scholarly work spans the period from late 19th through the mid-20th centuries. Course covers the major works of Du Bois. Topics include Du Bois as sociologist, historian, propagandist, and creative writer; taking into account his often shifting views on art and culture, politics, leadership, civil rights and the color line, trade unionism, Pan-Africanism, socialism, internationalism, and, of course, double consciousness, among other issues. Moreover, the course will deal with Du Bois as an Africanist, and his interaction with post-emancipation African intellectuals such as Booker T. Washington, Alexander Crummell, Anna Julia Cooper, Ida B. Wells-Barnett, Marcus Garvey, E. Franklin Frazier, Walter White and Thurgood Marshall. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 820 Language and Culture in Arabic-Speaking Communities (3). This course examines the links between language structure, patterns of use, language choice, and language attitudes in the diglossic and bi-lingual Arabic-speaking communities. It also explores language as a reflector and creator of Arab culture (e.g., linguistic encoding of politeness, the Quranic text as the spoken and written word, the role of tropes in Arabic rhetoric). The topics for discussion range from the micro-level language choice to the macro-level issues of national language policies and planning within the domain of government and education across the Arab world. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 845 Unveiling the Veil (3). This course seeks to unravel a complex cultural practice that has been misconstrued by many scholars. It explores the versatility of the meaning of the veil. It examines the ways in which the veil has become a symbol of privacy, cultural identity, religious assertion, resistance and liberation, bearing the symbols of ‘contradictions, backwardness, and modernity. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 851 Environmental Issues in Africa (3). Acquaints students with the complexities involved in understanding the interconnections that may include deforestation, desert expansion, wildlife conservation, soil erosion, climate change, coral reef destruction, water resources development, mangrove preservation, and the environmental effects of war, industrialization, and urbanization. Class presentations and projects synthesize the perspectives of both human and physical geography. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 852 Classical Islamic Literature (3). An examination of major developments in classical Islamic literature in the Middle East and beyond, with attention to the poetic and prose works (in translation) that emerged from them. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 853 Geography of African Development (3). Acquaints students with the values and social parameters of African agricultural and pastoral practice. Topics include customary land rights, African perspectives on the natural world, gender issues, agriculture, and the role of religion and traditional forces in the region. Students are introduced to geographic views with those of Western development practitioners and donor agencies. Case studies from different countries are used to highlight the regional differences. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 855 African Film and Video (3). A critical study of Africa and its peoples as depicted in films and videos. The aesthetic, cultural, economic, political, historical, and ideological aspects of African films and videos will be examined. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 860 Race, Gender, and Post-Colonial Discourses (3). An examination of the ways in which the concept of race, gender, and post-colonialism frame African literatures from the Caribbean, North America, and the continent itself. The course will focus on these discourses in their different regions. Students will focus on how which they can be contextualized and analyzed, at the same time examining their impact in literary praxis and theory. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 874 Slavery in the New World (3). Slavery, slave culture, and the slave trade in the U.S., Latin America, and the Caribbean will be examined comparatively. Attention will also be given to African cultures, the effects of the slave trade on Africa, and the effects of African cultures on institutions in the New World. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 880 Introduction to Modern Africa (3). An interdisciplinary approach to cross-cultural understanding of Africans place in the modern world. Specific emphasis will be given to the role of Africa in world history, African cultures, modern African history, and problems of development and nation building in Africa. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 884 Black American Literature (3). A study of the literature written by Black Americans from the pre-Civil War period to the present. Emphasis upon specific historical periods in the development of Black literature as well as on a critical analysis of major autobiographical, poetic, and fictional works. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC

AAAS 885 Race and the American Theatre (3). The representation(s) of race in this century will be examined in various plays and periodicals. The theatre analyzed according to political ideologies, dramatic movements and the ongoing representation of the others in the theatre. LEC

AAAS 890 The Rise and Fall of Apartheid (3). This course will deal with the fifty years of South African history during which apartheid came to be formulated, sustained, and perpetuated, and with the international response to the dismantlement of apartheid by 1990. Reference will also be made to the transformation process since April 1994. Additional advanced-level course work is required for students in this course beyond lower-level courses of the same name and/or description. LEC
American Studies

Chair: Cheryl Lester, chlester@ku.edu, (785) 864-2309
Graduate Director: Sherrie Tucker, sherrie.t@ku.edu, (785) 864-2305
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7545, www2.ku.edu/~amerst, (785) 864-4011

Professors: Katzman, Schofield
Professors Emeriti: Tuttle, Yetman
Associate Professors: Jels, Lester, Tucker
Assistant Professors: Chappell, Dorman, Flores, Golash-Boza, Hart


American studies is an interdisciplinary program offering graduate work on society and culture in the United States—past, present, and in global context. It accommodates a variety of individual academic objectives. All students are asked to define a concentration—a period or problem—and to draw on appropriate university resources relating to that area. Students must demonstrate coherence in their graduate work and be able to show relationships between their concentrations and the wider sociocultural system. To accomplish this, students must develop knowledge (including historical perspective) in the humanities and social sciences.

Admission

Admission is based primarily on the applicant’s undergraduate or graduate record or both, references from persons familiar with the applicant’s work, and a statement of academic objectives prepared by the applicant. Completion of a bachelor’s degree is required of all applicants. Students should have taken a substantial amount of work in American studies or in a related field (e.g., American history, literature, art, sociology, anthropology, economics, political science, psychology, journalism). Prospective students must take the Graduate Record Examination and have the results forwarded to the Graduate Application Processing Center. Submit your application online at www.graduate.ku.edu.

Send all other requested application materials to

The University of Kansas
American Studies Program, Graduate Applications
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7545

M.A. Degree Requirements

Students must complete a minimum of 30 hours of course work, including 18 hours of required courses. Students in the nonthesis option take an additional 12 hours of course work that constitute a specialized interest area (e.g., race and ethnicity, gender, popular culture) and must pass a written examination. Students choosing the thesis option complete an additional 6 hours of course work, at least 6 hours of thesis research, and an oral examination on the thesis research.

M.U.P. and M.A. in American Studies

This joint degree combines in a two-and-one-half-year program the normal two-year M.U.P. degree offered through the School of Architecture, Design and Planning and the normal one-year M.A. degree in American studies offered through the College of Liberal Arts and Sciences. It is designed for students interested in careers in policy planning and research involving the arts, social planning, cultural activities and facilities, and historic preservation. For more information, consult the respective program chairs. See also Urban Planning in the School of Architecture, Design and Planning chapter of this catalog.

Ph.D. Degree Requirements

Beyond the master’s degree and in addition to general requirements, a Ph.D. candidate must complete a program of core and elective courses and demonstrate historical depth in the chosen emphasis. Candidates must select a concentration related to one of (or a combination of) several broad subject areas, such as race and ethnicity, gender, popular culture, religion, labor and work, political life, art, music, architecture, family life, Great Plains culture, urban life, or social and cultural theory. A minimum of 24 credit hours of course work and 18 credit hours of dissertation is required beyond the master’s degree.

Comprehensive Examination. Candidates take the comprehensive examination after completing their doctoral course work and satisfying the research skills requirement. The comprehensive examination has written and oral components. The written examination takes the form of a paper that coherently defines the content and parameters of the student’s academic concentration, including a discussion of the state of the art in the broad area of scholarship in which the concentration falls; the major research and scholarly controversies in the area; the principal theoretical, conceptual, and methodological approaches informing it; and the direction the area is taking. After a student’s written examination paper has been accepted by his or her examining committee, she or he may take the oral comprehensive examination, which focuses upon, but is not limited to, the issues raised in the written examination paper.

Research Skills. The department accepts reading knowledge in any two languages that would be of professional use to the student, or fluency (excellent reading and conversational abilities) in any one language of professional use, or reading knowledge in one language and proficiency in a research skill, or proficiency in two research skills relevant to the graduate program (e.g., statistics or a computer language).

Dissertation. An interdisciplinary dissertation is required. The department has established a detailed description of the procedures for completing a dissertation. The student’s dissertation committee is composed of at least three faculty members, who initially review and approve the student’s research proposal and direct the research to its completion.

Final Examination. All students must pass a final oral defense of the dissertation.
American Studies | Anthropology

Handbook for Graduate Students

The department has prepared a handbook that summarizes procedures that a graduate student follows in working toward any one of the three graduate degrees. It contains a summary of regulations and departmental procedures and the rationale behind these regulations. The handbook is available online at www2.ku.edu/~amerst.

American Studies Courses

AMS 510 History of American Women—Colonial Times to 1870 (3).
AMS 511 History of American Women—1870 to Present (3).
AMS 512 History of Women and Work in Comparative Perspective (3).
AMS 515 American Women and World War II (3).
AMS 520 Topics in Latino Studies: _____ (3).
AMS 522 American Racial and Ethnic Relations (3).
AMS 529 Race and the American Theatre (3).
AMS 534 Comparative Racial and Ethnic Relations (3). NW
AMS 536 Ethnicity in the United States: _____ (3).
AMS 540 Culture, Space, and Power in Urban America (3).
AMS 550 Research Seminar in: _____ (3).
AMS 551 Research Project in American Studies (3).
AMS 552 Public Service in American Studies (3).
AMS 553 Honors in American Studies (3).
AMS 554 American Literature to 1900: _____ (3).
AMS 555 American Literature Since 1900: _____ (3).
AMS 556 Gender, Culture, and Migration (3).
AMS 576 Cultural Geography of the United States (3).
AMS 579 Geography of American Foodways (3).
AMS 580 American Art (3).
AMS 590 Transnational Asian Film (3).
AMS 629 Sociology of Sport (3).
AMS 650 Jazz and American Culture (3).
AMS 652 Jazz I, Roots to 1955 (3).
AMS 653 Jazz II, 1955-Present (3).
AMS 680 Jazz Autobiography (3).
AMS 682 Jazz Narratives in Novels and Films (3).
AMS 690 Black Cultural Studies (3).
AMS 694 Directed Readings (1-4).
AMS 696 Studies in: _____ (3).
AMS 737 Music in America (3). A survey of historical developments from the Pilgrims to the present. (Same as MUSC 759.) Prerequisite: One course in the field of music history and literature or consent of instructor. LEC
AMS 767 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABCS 787, COMS 787, PSYC 787, and SOC 767.) Formerly HDFL 787. LEC
AMS 787 Field Work (1-12). Supervised field research in aspects of American civilization. Prerequisite: Consent of instructor. FLD
AMS 801 Introduction to American Studies (3). An introduction to the field of American Studies through an examination of some of the classic and innovative works, issues, debates, and controversies in the history and the literature of American Studies. LEC
AMS 802 Theorizing America (3). Drawing from a broad range of perspectives (e.g., cultural theory, social theory, literary theory, etc.), this course will introduce students to current theoretical debates in American studies and the concepts that inform them. LEC
AMS 803 Research Methods in American Studies (3). An introduction to the range of interdisciplinary research methods in American studies. Emphasis will be placed on an examination of the assumptions, logistics, and procedures involved in various approaches to understanding American society and culture. LEC
AMS 804 Research Seminar (3). An intensive application of theoretical and methodological issues to the development of specific substantive research problems. Students will be expected to design and implement a study that will be critically assessed in the seminar. LEC
AMS 805 American Pluralism: Race, Ethnicity, and Religion in American Life (3). Analysis of the dynamics of intercultural and intergroup relations in America with special emphasis on the examination of major conceptual perspectives that have characterized the study of race, ethnicity, and religion in American life. LEC
AMS 808 Studies in: _____ (3). Interdisciplinary study of different aspects of the American experiences in different semesters. LEC
AMS 835 Colloquium in the History of Gender (3). This colloquium will cover theoretical and topical readings on the history of manhood, womanhood, and gender systems. (Same as HIST 895 and WCGS 835.) LEC
AMS 836 Colloquium in United States Women's History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as HIST 896 and WCGS 836.) LEC
AMS 837 Comparative Colloquium in Women's History (3). This colloquium will approach the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as HIST 897 and WCGS 837.) LEC
AMS 896 Examination Preparation (1-6). Directed and independent study in preparation for the M.A. examination. May be repeated. RSH
AMS 899 Thesis (1-6). Investigation of a topic for master’s thesis. Total enrollment in this course may not exceed six hours of credit. THE
AMS 900 Teaching Seminar (1-6). This seminar is designed to assist students in the preparation, presentation, and evaluation of teaching in American Studies. LEC
AMS 973 Seminar in United States Women’s History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as HIST 973 and WCGS 873.) LEC
AMS 996 Examination Preparation (1-9). Directed and independent study in preparation for the doctoral comprehensive examinations. May be repeated. RSH
AMS 997 Directed Readings (1-4). Directed reading in an area of American culture in which there is no appropriate course in the offerings of the American Studies program or of the cooperating departments, but in which there is a member of the graduate faculty competent and willing to direct a program of study. RSH
AMS 998 Seminar in: _____ (3). Topics vary from semester to semester. Graduate students are consulted in selecting topics. LEC
AMS 999 Dissertation (1-12). THE

Anthropology

Chair: Jim Mielke, mielke@ku.edu
Graduate Adviser: Jack Hofman, hofman@ku.edu
Fraser Hall, 1415 Jayhawk Blvd., Room 622
Lawrence, KS 66045-7540
www2.ku.edu/~kuanth, (785) 864-4103, fax: (785) 864-5224
Professors: Crawford, Frayer, Hanson, Janzen, Mandel, Mielke, Moos, Stull
Professors Emeriti: Johnson, Montet-White, Smith, Squier, Yamamoto
Associate Professors: Dean, Gibson, Gray, Hofman, Hoopes, Radovanovic
Assistant Professors: Dwyer, Hannoum, Metz, Redd, Takeyama

The graduate program consists of 19 faculty members and about 80 students, giving a professor-student ratio of about one to four and allowing a great deal of direct interaction between faculty and students. The department awards M.A. and Ph.D. degrees and has successfully placed most of its Ph.D. graduates in professional positions.

The department offers graduate training in archaeology, biological anthropology, linguistic anthropology, and social/cultural anthropology. It has expertise in applied anthropology.

American studies students concentrate on broad subject areas such as race and ethnicity, gender, popular culture, religion, labor and work, political life, art, music, architecture, family life, Great Plains culture, urban life, or social and cultural theory.

The Department of Anthropology offers graduate training in archaeology, biological anthropology, linguistic anthropology, and social/cultural anthropology.
anthropological genetics, molecular genetics, evolutionary studies, language contact and endangerment, medical anthropology, Native American linguistics, paleoanthropology, symbolic anthropology, visual anthropology, New World and European prehistory, and geoarchaeology. Geographic strengths include Asia, Europe, Latin America, Native North America, the Pacific, Sub-Saharan Africa, and contemporary United States. The department is closely associated with the Laboratory of Biological Anthropology and the Center for Archaeological Research.

**Admission**

The Graduate Record Examination is recommended but not required for admission. The graduate program begins at an advanced level. Preparation for it through completion of an undergraduate major in anthropology is encouraged but not required. Some undergraduate preparation in fields closely related to anthropology, such as biology, sociology, psychology, linguistics, economics, geography, or geology, is strongly recommended. Undergraduate courses in such subjects as biology, statistics, philosophy, genetics, computer science, and history are of considerable value to the graduate student in anthropology. Proficiency in a modern foreign language and in statistics is of special importance to candidates for graduate work in anthropology and should be acquired during the undergraduate years. All students entering the program with a bachelor’s degree must enroll in the M.A. program. Admission to the Ph.D. program is ordinarily contingent upon completion of the master’s degree in anthropology. A student with a master’s degree in anthropology from another institution may apply directly to the Ph.D. program.

Submit your application online at www.graduate.ku.edu.

Send all other requested application materials to:

**The University of Kansas**

Department of Anthropology

Fraser Hall, 1415 Jayhawk Blvd., Room 622

Lawrence, KS 66045-7540

**M.A. Degree Requirements**

The M.A. program is a general curriculum for students who wish to enter the Ph.D. program in anthropology or who plan to pursue graduate studies only to the M.A. level. Formal requirements for the M.A. include (1) completion of 30 credit hours of graduate work in anthropology and related disciplines, including ANTH 701, ANTH 702, ANTH 703, and ANTH 704; (2) completion of the subdiscipline requirements; (3) completion of the M.A. thesis; and (4) passing the final M.A. examination.

**Ph.D. Degree Requirements**

The Ph.D. in anthropology is awarded to candidates who have demonstrated specialized competence in one or more of the general fields and who have contributed to the body of knowledge and theory in the specialized field through independent, original research.

**Research Skills.** In the course of the graduate career, but before the comprehensive examinations, the Ph.D. aspirant must satisfy one of the following options:

1. Demonstrate a comprehensive reading and speaking knowledge of one foreign language relevant to the student’s research interests in which there exists a significant research literature in anthropology.
2. Demonstrate proficiency in the reading of two foreign languages relevant to the student’s research interests in which there exists significant research literature in anthropology.
3. Demonstrate proficiency in the reading of one foreign language relevant to the student’s research interests in which there exists a significant research literature in anthropology.

(The latter requirement may be satisfied by a speaking knowledge of a language that the student will employ in fieldwork, but in which there is no written research literature.)

4. Demonstrate competence in two research skills relevant to the student’s special research requirements in anthropology, provided that the student

   (a) Has met the undergraduate foreign language proficiency requirement of the College of Liberal Arts and Sciences of the university as either an undergraduate or a graduate student or
   (b) Has met at another college or university a foreign language proficiency requirement that is accepted as fulfilling the requirement of KU’s College of Liberal Arts and Sciences.

Research skills referred to in options 3 and 4 may be selected from those approved, or the student may propose to the committee a course of study by which he or she may acquire another research skill. Competence in a research skill is certified by a committee appointed by the department. Competence in a foreign language is tested and certified by authorized members of the appropriate department.

On completion of a Foreign Language or Other Research Skills requirement, the student should notify the graduate coordinator, who enters it in the student’s permanent record.

**Residence Requirement.** Two semesters, normally consecutive, or one semester and one summer session must be spent in residence study at KU.

**Field Statements.** Students must become thoroughly familiar with the literature pertinent to their specializations and doctoral research problems. The student who submits field statements is asserting that he or she has achieved competence in limited areas defined by the subdiscipline, as demonstrated by bibliographies and written treatments of the research problems in those areas. The comprehensive examinations are based on the areas specified in the field statements.

**Written and Oral Comprehensive Examinations.** The student’s doctoral committee devises and judges the written comprehensive examinations, which may be taken either together or at different times. If the committee is satisfied with the caliber of the student’s field statements and written examinations, it may schedule the oral comprehensive examination, providing all other requirements have been fulfilled.

**Dissertation Proposal.** From the beginning of doctoral study, the student should plan to conduct a doctoral dissertation project. This is an independent piece of research, usually requiring fieldwork, and leading to a dissertation that contributes to anthropological knowledge.

**Defense of the Dissertation.** When the dissertation is accepted by the dissertation committee, a final oral examination is held.

**Handbook for Graduate Students**

Detailed information, application deadlines, and general information may be found in The Graduate Program in Anthropology, available on request from the department.

**Anthropology Courses**

ANTH 500 Topics in Archaeology: (3).
ANTH 501 Topics in Sociocultural Anthropology: (3).
ANTH 502 Topics in Anthropological Linguistics: (3).
ANTH 503 Topics in Biological Anthropology: (3).
ANTH 504 North American Archaeology: (3).
ANTH 505 Prehistory of Eastern North America (3).
ANTH 506 Ancient American Civilizations: Mesoamerica (3). NW
ANTH 507 The Ancient Maya (3).
ANTH 508 Ancient American Civilizations: The Central Andes (3). NW
ANTH 510 An Introduction to Southwestern Archaeology (3). NW
ANTH 512 Ethnobiology: (3).
ANTH 514 The Near East in Prehistory (3).
ANTH 515 Topics in Old World Prehistory: (3).
ANTH 516 Hunters and Gatherers (3).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 517</td>
<td>Geoarchaeology</td>
<td>3. The fundamental issues, methods, and theories in contemporary cultural anthropology and anthropological linguistics. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC</td>
</tr>
<tr>
<td>ANTH 518</td>
<td>Environment and Archaeology</td>
<td>3. Studies in technological change through invention, evolution, and diffusion. Topic for semester to be announced. LEC</td>
</tr>
<tr>
<td>ANTH 519</td>
<td>Lithic Technology</td>
<td>3. A survey of the development of method and theory in American archaeology, with emphasis on North America. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 520</td>
<td>Archaeological Ceramics</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 521</td>
<td>Zooloachaeology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 522</td>
<td>Paleoenobotany</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 523</td>
<td>Great Plains Archaeology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 540</td>
<td>Demographic Anthropology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 542</td>
<td>Biology of Human Nutrition</td>
<td>4. NW</td>
</tr>
<tr>
<td>ANTH 543</td>
<td>Anthropology of Food and Nutrition</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 544</td>
<td>Origins of Native Americans</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 545</td>
<td>Contemporary Health Issues in Africa</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 549</td>
<td>Human Paleontology: Fossil Apes to Australopithecus</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 550</td>
<td>Human Paleontology: Homo Erectus to Homo Sapiens</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 560</td>
<td>Introduction to Economic Anthropology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 562</td>
<td>Mexamerica</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 563</td>
<td>Cultural Diversity in the United States</td>
<td>3. SC</td>
</tr>
<tr>
<td>ANTH 564</td>
<td>The Peoples of Africa</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 565</td>
<td>Popular Images in Japanese Culture, Literatures, and Films</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 567</td>
<td>Japanese Ghosts and Demons</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 568</td>
<td>Kongo Trans-Atlantic</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 571</td>
<td>Violence, Aggression, and Terrorism in the Modern World</td>
<td>3-4.</td>
</tr>
<tr>
<td>ANTH 580</td>
<td>Feminism and Anthropology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 582</td>
<td>Ethnobotany</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 583</td>
<td>Love, Sex, and Globalization</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 586</td>
<td>Visual Anthropology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 595</td>
<td>The Colonial Experience</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 603</td>
<td>Shamanism Past and Present</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 605</td>
<td>Mortuary Practices in the Archaeological Record</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 619</td>
<td>Field Concepts and Methods in Geoarchaeology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 648</td>
<td>Human Osteology</td>
<td>4. NW</td>
</tr>
<tr>
<td>ANTH 650</td>
<td>Human Reproduction: Biology and Behavior</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 652</td>
<td>Population Dynamics</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 660</td>
<td>Human Reproduction: Culture, Power, and Politics</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 661</td>
<td>Cultural Dynamics</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 663</td>
<td>The Anthropology of Islam</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 665</td>
<td>Women, Health, and Healing in Latin America</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 666</td>
<td>Anthropology of Religion</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 667</td>
<td>Primitive Mythology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 670</td>
<td>Contemporary American Culture</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 671</td>
<td>The Culture of Consumption: (e.g., United States and Japan)</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 672</td>
<td>Meat and Drink in America</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 673</td>
<td>Neoliberalism and Globalization</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 674</td>
<td>Political Anthropology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 675</td>
<td>Anthropology of Law</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 680</td>
<td>Culture and Human Biology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 684</td>
<td>Anthropology and the Health Sciences</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 695</td>
<td>Cultural Ecology</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 696</td>
<td>Language, Culture, and Ethnicity in Prehistoric Eastern Europe</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 699</td>
<td>The Anthropology Museum</td>
<td>3. NW</td>
</tr>
<tr>
<td>ANTH 701</td>
<td>History of Anthropology</td>
<td>3. Development of the field of anthropology and its relations with intellectual history. Emphasis on method and theory in historical context. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC</td>
</tr>
<tr>
<td>ANTH 702</td>
<td>Current Archaeology</td>
<td>3. An introduction to fundamental theoretical orientations and methodological approaches in world archaeology. Case studies illustrate data acquisition, dating methods, culture history, paleoenvironmental models, and culture processes. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC</td>
</tr>
<tr>
<td>ANTH 703</td>
<td>Current Biological Anthropology</td>
<td>3. The fundamental issues, methods, and theories in contemporary biological anthropology. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC</td>
</tr>
<tr>
<td>ANTH 704</td>
<td>Current Cultural Anthropology</td>
<td>3. The fundamental issues, methods, and theories in contemporary cultural anthropology and anthropological linguistics. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC</td>
</tr>
<tr>
<td>ANTH 705</td>
<td>Technological Change</td>
<td>3. Studies in technological change through invention, evolution, and diffusion. Topic for semester to be announced. LEC</td>
</tr>
<tr>
<td>ANTH 710</td>
<td>History of American Archaeology</td>
<td>3. A survey of the development of method and theory in American archaeology, with emphasis on North America. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 715</td>
<td>Seminar in Plains Archaeology</td>
<td>2-4. Problems in the archaeology of the Great Plains region, with an emphasis on prehistoric developments. LEC</td>
</tr>
<tr>
<td>ANTH 718</td>
<td>Seminar in Latin American Archaeology</td>
<td>3. In-depth examination of specific problems and issues in the study of Precolombian societies of Mesoamerica, Central America, and South America. Topic for semester to be announced. Prerequisite: ANTH 506, ANTH 508, and/or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 720</td>
<td>Seminar in Old World Prehistory</td>
<td>2-4. Studies of prehistoric cultures and their natural environments. Topic for semester to be announced. Prerequisite: Graduate standing in anthropology or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 730</td>
<td>Linguistics in Anthropology</td>
<td>3. The study of language as it concerns anthropological research, language systems, language change, language history, semantics, and linguistic analysis as an ethnographic tool. (Same as LING 730.) Prerequisite: Graduate standing. LEC</td>
</tr>
<tr>
<td>ANTH 740</td>
<td>Linguistic Data Processing</td>
<td>3. The tools and techniques necessary to analyze linguistic fieldwork data, including research design, recording, and elicitation techniques, computational data processing, and analysis, and field ethics. Techniques of research, field recording, and data analysis technology. Methods of phonetic transcription, grammatical annotation, and analysis of language context. Practice of techniques via short studies of at least one language. (Same as LING 740.) Prerequisite: LING 705 or permission of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 741</td>
<td>Field Methods in Linguistic Description</td>
<td>3. The elicitation and analysis of phonological, grammatical, and discourse data from a language consultant. In-depth research on one language. Techniques of research design, methods of phonetic transcription, grammatical annotation, and analysis of language context. (Same as LING 741.) Prerequisite: LING 705 or permission of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 747</td>
<td>North American Indian Languages</td>
<td>3. Introduction to the nature and distribution of North American Indian languages. Prerequisite: ANTH 306 or ANTH 430 or ANTH 730. LEC</td>
</tr>
<tr>
<td>ANTH 748</td>
<td>Language Contact</td>
<td>3. Theories and case studies of languages in contact. Areal and genetic linguistics, genesis of pidgins and creoles, multilingualism. Social, political, economic, and geographic factors in language change. (Same as LING 748.) Prerequisite: A course in linguistics. LEC</td>
</tr>
<tr>
<td>ANTH 749</td>
<td>Linguistics and Ethnolinguistics of China and Central Asia</td>
<td>3. Selected topics in linguistics and linguistic anthropology, focusing on dominant and/or minority languages of China, Central Asia, or a particular region of Central and Eastern Eurasia. Topics may include any subfield of linguistics, including language contact, typology, dialectology, and sociolinguistics. Topic for semester to be announced. (Same as LING 749.) Prerequisite: A course in linguistics. LEC</td>
</tr>
<tr>
<td>ANTH 750</td>
<td>Disease and Adaptation</td>
<td>3. The role of disease in human evolution, variation, and adaptation is examined. Topics include paleopathology, epidemics, and genetic/cultural adaptation to certain diseases. Graduate version of ANTH 450 with more advanced requirements. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 754</td>
<td>Biological Bases of Human Behavior</td>
<td>3. The role of behavioral genetics in normal behavior is examined in this seminar. There is special emphasis on the genetics of complex human behavior such as sensory perception, aggression, intelligence, proverbs, kinesics, and learning. Several abnormal conditions, such as schizophrenia, chromosome aberrations, alcoholism, and brain dysfunction are discussed in terms of the genetic and environmental interactions. LEC</td>
</tr>
<tr>
<td>ANTH 756</td>
<td>Genetics of Isolates</td>
<td>3. The evolutionary effects of finite population size and reproductive isolation are discussed in this seminar. Stochastic processes, genetic distances, approaches to population structure, and measures of inbreeding are considered. Prerequisite: ANTH 652 or consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 759</td>
<td>Dental Anthropology</td>
<td>3. An intensive study of human teeth. Principles of eruption, growth, genetics, anatomy, pathologies, measurements, casting, and cultural changes in teeth will be presented. Prerequisite: Consent of instructor. LEC</td>
</tr>
<tr>
<td>ANTH 761</td>
<td>Introduction to Medical Anthropology</td>
<td>3. SC An introduction to the social and cultural practices that contribute to health and disease, including a survey of therapy systems in both Western and non-Western societies (e.g., Native American, African, Western allopathic medicine, etc.). This course should be of special interest to premedical students and majors in the allied health professions. Graduate version of ANTH 461 with more advanced requirements. Prerequisite: Graduate standing or consent of instructor. LEC</td>
</tr>
</tbody>
</table>

The Department of Anthropology has expertise in applied anthropology, anthropological genetics, molecular genetics, evolutionary studies, language contact and endangerment, medical anthropology, Native American linguistics, paleoanthropology, symbolic anthropology, visual anthropology, New World and European prehistory, and geoarchaeology.

KU’s Language Acquisition Studies Lab works with children in more than 100 school districts to increase understanding of young children’s language development.
ANTH 762 Human Growth and Development (3). Consideration of comparative physical growth patterns throughout the human life cycle. Sex and population differences in skeletal, dental, and sexual maturation. Effect of genetic and environmental factors upon growth and maturation. Prerequisite: An introductory course in biological anthropology or consent of instructor. LEC

ANTH 764 Selected Topics in Human Paleontology: (3). Intensive, high-level survey and critique of the application of modern biological theory of evolution and taxonomy to the problems of primate and human evolution. Prerequisite: Consent of instructor. LEC

ANTH 766 Topics in Biological Anthropology: (3-9). Intensive consideration of special problems in cultural anthropology. Topic for semester to be announced. Students may repeat the course for different topics. Prerequisite: Consent of instructor. LEC

ANTH 769 Seminar in Primate Studies (3). Survey of field and laboratory investigations of the comparative anatomy and behavior of nonhuman primates. LEC

ANTH 771 Seminar in Physical Anthropology: (3). A practical course in the use of special laboratory techniques of biological anthropological research and methods of data presentation. Prerequisite: Consent of instructor. LAB

ANTH 775 Seminar in Cultural Anthropology: (3-9). An advanced study of the use of special laboratory techniques of biological anthropological research and methods of data presentation. Prerequisite: Consent of instructor. LEC

ANTH 780 Social Organization (3). Comparative analysis of the structure, development, and function of human social groups. Emphasis on kinship, legal, economic, and political institutions. Prerequisite: Undergraduate standing. LAB

ANTH 781 Symbolic Anthropology (3). An examination of anthropological approaches to religion, world view, and other symbol systems in simple and complex societies. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 783 Doing Ethnography (3). Ethnography is both process and product. The product is the representation of a culture (or selected aspects of a culture), based on fieldwork, the common term for the ethnographic process. This course explores how ethnographers prepare for the field, do their fieldwork, then report it. LEC

ANTH 785 Topics in Ethnology: (3-9). Topic for semester to be announced. Usually the course will focus on selected problems in the social and cultural life of a people in a particular geographic region of the world. Coverage will include both the classical ethnological literature as well as special issues of current concern. Students may repeat the course for different topics. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 786 Ethnographic Documentary Production (3). This course combines classroom and fieldwork in applications of theories, ethics, and methods of visual representation. Students carry out team-based ethnographic fieldwork projects through which they learn about pre-production, video production, and nonlinear post-production of ethnographic video documentaries. Prerequisite: Successful completion of ANTH 564 or permission of instructor. LEC

ANTH 788 Symbol Systems: (3). Anthropological approaches to the study of world view, religion, folklore, mythology, art, and other expressive behavior. Topic for the semester to be announced. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 789 Anthropology of Gender: Advanced Seminar in the Four Fields (3). This seminar is intended primarily for graduate students in anthropology or other disciplines that have an interest in any of the subdisciplines of anthropology (archaeology, linguistic anthropology, biological anthropology, and sociocultural anthropology) and/or anthropological theories and methods. Undergraduates pursuing Honors or other major research projects are also encouraged to participate. Students will receive training in the contemporary theories, research, and pedagogies informing the anthropology of gender. Class participants will explore how these materials intersect with current anthropological research projects, and develop syllabi specific to their interests. Prerequisite: Consent of instructor. LEC

ANTH 794 Material Culture (3). The historical and cross-cultural study of artifacts as embodiments of technological, social, organizational, and ideological aspects of culture. LEC

ANTH 795 Anthropology Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection care and management, public education, and exhibit development, with emphasis on the particular requirements of each student. Limit of six hours of credit for the M.A. degree. (Same as AMS 799, BIOL 799, GEOL 799, and MUSE 799.) FLD

ANTH 810 Seminar in Ethnolinguistics: (2-3). An advanced study of the relations between language and culture. Subject will vary each semester; students may repeat the course more than once. (Same as Ling 810.) LEC

ANTH 811 Quantitative Archaeology (3). Instruction in statistical methods for analyzing quantitative data. Topics will include techniques for handling nominal, ordinal, and ratio-scale variables, the collection and presentation of quantitative information, and the use of computers. Prerequisite: Graduate standing and college-level algebra and/or consent of instructor. LEC

ANTH 846 Seminar in Paleobiology: (2-4). Subject matter of seminar to be announced for semester. LEC

ANTH 851 Quantitative Archaeology: (3-6). A two-semester course designed to provide graduate students with basic principles in the analysis of archaeological data. Course content will include an introduction to archaeological systemsatics, analytical procedures, application of multivariate statistics, and computer applications. Topic for semester to be announced. LEC

ANTH 853 Theory and Current Problems in Archaeology (3). Consideration of scientific methodology, basic assumptions of anthropological archaeology, relationship of archaeology and anthropological archaeology, and current theoretical and methodological trends in archaeology. LEC

ANTH 876 Advanced Medical Anthropology: (3-6). This course presents an advanced introduction to the major concepts, methods, and theories of medical anthropology. Prerequisite: Consent of instructor. LEC

ANTH 880 Advanced Feminist Anthropology: (3-6). Intensive investigation of special problems in feminist political. Topic for the semester to be announced. May be repeated for a total of six hours credit. (Same as WGSS 880.) Prerequisite: Permission of instructor. LEC

ANTH 889 Summer Archaeological Field Work (1-8). Under the direction of a professional archaeologist, undergraduate and graduate students are taught proper procedures for the excavation and laboratory analysis of data from a prehistoric or historic archaeological site. Data gathered may be used for additional graduate research. Enrollment by application; limited to twenty students. A fee for subsistence costs will be charged. FLD

ANTH 890 Training in Archaeological Field Work (1-6). Graduate students are taught techniques of archaeological field work, including survey and excavation, as well as laboratory procedures, including artifact classification and curation. FLD

ANTH 896 Graduate Research (1-9). Individual investigation of special problems in anthropology. Limit of six hours credit for the M.A. degree. RSH

ANTH 899 Master’s Thesis (1-12). Limit of six hours credit for the M.A. degree. THE

ANTH 899 Graduate Research (1-9). Individual investigation of special problems in anthropology. RSH

ANTH 999 Doctoral Dissertation (1-12). THE

The KU Program in Human Development and Family Life
Chair: Edward K. Morris, absc@ku.edu
Graduate Director: Gregory J. Madden
Dole Human Development Center, 1000 Sunnyside Ave., Room 4001 Lawrence, KS 66045-7561
www.absc.ku.edu, (785) 864-4840, fax: (785) 864-5202
Professors: Fawcett, Greenwood, Miller, Morris, Roberts, Semb, Sheldon, Sherman, Vernberg, Warren, White
Associate Professors: Jackson, Madden, Steele
Assistant Professors: Biggs, Dozier, Neidert, Watson-Thompson

The department’s graduate program trains scientist-practitioners and researchers in the discovery and production, translation and application, and communication of knowledge in the behavioral sciences for understanding and solving problems of societal importance. For this, the department offers a Master of Arts in applied behavioral science and a Doctor of Philosophy in behavioral psychology. In both degree programs, the department requires (1) a sequence of courses that integrates the basic principles of behavior, experimental methods and research design, and conceptual foundations with (2) training in basic, applied, and intervention research. Among the areas of application are early childhood, education, developmental disabilities, adolescence, family enhancement, independent living, physical disabilities, and health promotion and community development. Other areas are described in the graduate application materials available from the department and on the Web site. Since its inception, the department has received notable grant funding for its research and training. In 2000, it received an award for Enduring Programmatic Contributions by the Society for the Advancement of Behavior Analysis.

Admission

Applicants seeking admission to the master’s or doctoral program should contact the department for application forms, as well as for materials beyond those described here. Applications are submitted to the Graduate Application Processing Center, which records and forwards them to the department. Applicants submit a completed application form and one official transcript of all undergraduate and any graduate course work. They also may submit copies of relevant scholarly or professional work, published or unpublished. Reports of Graduate Record Examination scores are encouraged but not required.
Ph.D. in Behavioral Psychology

Degree Requirements

The doctoral program trains highly competent researchers in applied behavioral science (e.g., applied behavior analysis, applied psychology). Students are taught to discover and produce, translate and apply, and communicate knowledge in the behavioral sciences for understanding and solving problems of societal importance. The curriculum requires a sequence of instruction that integrates (1) courses in the basic principles of behavior, experimental methods and research design, and conceptual foundations with (2) training in basic, applied, and intervention research (e.g., assessment, analysis, intervention, evaluation).

The doctoral training program follows a junior colleague model. Students work closely with their advisors and join them in every aspect of professional development. This includes designing and conducting research, preparing manuscripts for presentation and publication, and presenting and publishing those manuscripts. Students typically work with one adviser, but they may work with other faculty members or have co-advisers. If the student’s or adviser’s interests change over the course of training, students are free to seek another adviser.

Course Requirements. The doctoral degree program requires students to take one course in eight content areas, along with two practicum courses. The areas and the practicum courses are

1. Principles of Behavior I (3). The science of behavior (observation, experimentation), laboratory methods, basic behavioral principles (e.g., reinforcement, stimulus control), and their applications. (e.g., early childhood, disabilities).
2. Research Methods I (3). Tactics and strategies of scientific research (objectivity, empiricism), the logic of experimentation (validity, reliability), measurement and direct observation, and experimental designs for single-subject and time-series analyses.
3. Conceptual Foundations I (3). The history and philosophy of behavioral science, contemporary advances in basic research for application, the analysis of everyday conduct (e.g., cognition, emotion), and current issues in the discipline and profession (e.g., relations between basic and applied research).
4. Applied Behavior Analysis I (3). Advanced treatment of the tactics and strategies of basic, applied, and intervention research (e.g., measurement, design), with an emphasis on conducting research in applied settings (e.g., community, school, organizations).
5. Research Methods II (3). Advanced treatment of the tactics and strategies of basic, applied, and intervention research relevant to new approaches (e.g., ecobehavioral analysis, functional assessment), special problems (e.g., autism, substance abuse), atypical populations (e.g., adolescents, elders), and applied settings (e.g., schools, nursing homes).
7. Developmental Psychology I (3). An overview of the developmental issues in both basic and applied research (cognitive, perception, bias), professional communication (authorship, plagiarism, publications, presentations), and professional development (vita preparation, job search strategies).
8. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.
9. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.

In addition, students must present the results of their research orally at a preseminar meeting before defending the master’s thesis and once again before defending the dissertation.

Master’s Thesis. Students complete an empirically based master’s thesis and pass an oral examination on it. With an adviser’s approval, empirically based theses from other programs may meet this requirement.

Research Skill. Doctoral students must demonstrate proficiency in a Foreign Language or Other Research Skill (FLORS) independent of, but consistent with and contributing to, their research programs. In the department, this may be met by (1) demonstrating proficiency in productive and receptive spoken language other than English or in sign language; (2) demonstrating reading proficiency in two languages other than English; (3) demonstrating competence in both computer programming and computer applications; (4) completing three thematically related courses beyond those required to satisfy the ABS doctoral requirements (e.g., research methods, quantitative methods, epidemiology, etc.).

Applied Behavioral Science

Submit your application online at www.graduate.ku.edu. Send all other requested application materials to:

The University of Kansas
Department of Applied Behavioral Science, Dole Human Development Center, 1000 Sunnyse Ave., Room 4001
Lawrence, KS 66045-7561

Applicants also must obtain letters of recommendation from three professionals familiar with their academic, scholarly, or professional records. These are submitted directly to the department by the references, not by the applicants.

Among the department’s application materials is a list of the faculty members and descriptions of their research, scholarly, and professional interests. Applicants select at least three faculty members whose interests match their own. These faculty members constitute the applicant’s admissions committee; they review the application and supporting materials. An applicant is accepted when one of the faculty members consents to admit the student. This faculty member becomes the adviser of record and secures his or her approval, empirically based theses from other programs may meet this requirement.

Course Requirements. The doctoral degree program requires students to take one course in eight content areas, along with two practicum courses. The areas and the practicum courses are

1. Principles of Behavior I (3). The science of behavior (observation, experimentation), laboratory methods, basic behavioral principles (e.g., reinforcement, stimulus control), and their applications. (e.g., early childhood, disabilities).
2. Research Methods I (3). Tactics and strategies of scientific research (objectivity, empiricism), the logic of experimentation (validity, reliability), measurement and direct observation, and experimental designs for single-subject and time-series analyses.
3. Conceptual Foundations I (3). The history and philosophy of behavioral science, contemporary advances in basic research for application, the analysis of everyday conduct (e.g., cognition, emotion), and current issues in the discipline and profession (e.g., relations between basic and applied research).
4. Applied Behavior Analysis I (3). Advanced treatment of the tactics and strategies of basic, applied, and intervention research (e.g., measurement, design), with an emphasis on conducting research in applied settings (e.g., community, school, organizations).
5. Research Methods II (3). Advanced treatment of the tactics and strategies of basic, applied, and intervention research relevant to new approaches (e.g., ecobehavioral analysis, functional assessment), special problems (e.g., autism, substance abuse), atypical populations (e.g., adolescents, elders), and applied settings (e.g., schools, nursing homes).
7. Developmental Psychology I (3). An overview of the developmental issues in both basic and applied research (cognitive, perception, bias), professional communication (authorship, plagiarism, publications, presentations), and professional development (vita preparation, job search strategies).
8. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.
9. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.

In addition, students must present the results of their research orally at a preseminar meeting before defending the master’s thesis and once again before defending the dissertation.

Master’s Thesis. Students complete an empirically based master’s thesis and pass an oral examination on it. With an adviser’s approval, empirically based theses from other programs may meet this requirement.

Research Skill. Doctoral students must demonstrate proficiency in a Foreign Language or Other Research Skill (FLORS) independent of, but consistent with and contributing to, their research programs. In the department, this may be met by (1) demonstrating proficiency in productive and receptive spoken language other than English or in sign language; (2) demonstrating reading proficiency in two languages other than English; (3) demonstrating competence in both computer programming and computer applications; (4) completing three thematically related courses beyond those required to satisfy the ABS doctoral requirements (e.g., research methods, quantitative methods, epidemiology, etc.).
The Schiefelbusch Institute for Life Span Studies' 13 centers and Peruvian affiliate have more than 140 programs and projects active at any one time in Kansas as well as other states and Peru. Many projects directly serve individuals, families, and communities and are located in underserved Kansas City neighborhoods and rural Kansas counties.

Clinical Child Psychology Program
For information on this degree, see Clinical Child Psychology in this chapter of the catalog.

Psychology Licensure
The department’s doctoral program in behavioral psychology does not satisfy requirements for licensure in psychology. Students wishing to meet these requirements should, with their advisers, consult the Association of State and Provincial Psychology Boards for state and province requirements, www.asppb.org. In developing a curriculum that fulfills these requirements, students should consider carefully whether the required courses and clinical experiences for state and province licensure are offered by the department and university and are open to them.

Affiliated Research and Training Programs
For information about the Schiefelbusch Institute for Life Span Studies, Juniper Gardens Children’s Project, the Research and Training Center for Independent Living, the KU Work Group for Health Promotion and Community Development, and the Kansas Intellectual and Developmental Disabilities Research Center, see www.lsi.ku.edu.

Applied Behavioral Science Courses
ABSC 509 Contemporary Behavioral Science: Historical, Conceptual, and Comparative Foundations (3).
ABSC 535 Developmental Psychopathology (3).
ABSC 542 Applied Gerontology (3).
ABSC 555 Issues in Administering Early Childhood Services (2).
ABSC 560 The Juvenile Justice System: A Behavioral and Legal Perspective (3).
ABSC 565 Applied Developmental Psychology (3).
ABSC 599 Honors and Thesis in Applied Behavioral Science (1-5).
ABSC 606 Special Projects in the Community (1-10).
ABSC 620 Drug Abuse: From Basic Research to Public Policy (3).
ABSC 626 Psychology of Adolescence (3).
ABSC 632 Advanced Child Behavior and Development (3).
ABSC 671 Applied Behavior Analysis (3).
ABSC 672 Applied Behavior Analysis, Honors (3).
ABSC 675 Practicum in Infant-Toddler Care and Early Intervention I (3-5).
ABSC 676 Practicum in Infant-Toddler Care and Early Intervention II (3-5).
ABSC 677 Practicum in Preschool Education and Intervention I (3-5).
ABSC 678 Practicum in Preschool Education and Intervention II (3-5).
ABSC 679 Practicum in Behavior Analysis Research in Early Childhood Education (1-6).
ABSC 680 Practicum in Advanced Laboratory in the Development of Behavioral Treatments for Children with Autism (1-6).
ABSC 685 Practicum in Community-Based Residential or Day Treatment Programs for Disabled Adults (3-6).
ABSC 687 Practicum in Behavioral Gerontology (1-6).

Dissertation. In consultation with the adviser, the student proposes an empirically based dissertation and a dissertation committee. All four components of the comprehensive examination must be passed before the oral defense of the dissertation may be scheduled. The written dissertation must be orally defended. Any interested member of the College’s Graduate Faculty may attend.

Behavioral Psychology and Community Health Promotion: Joint Ph.D./M.P.H. Degree
The department offers a joint Ph.D./M.P.H. degree in collaboration with the Master of Public Health program in the Department of Preventive Medicine and Public Health at KU Medical Center. The degree incorporates efficiencies in the elective and research requirements of both departments. This is the first degree in the nation to combine an M.P.H. with the strengths of advanced study in applied behavioral science. Faculty and student research teams address issues in community health and development, child and youth health and development, disabilities and independent living, and healthy aging. Separate admission is required to both the Ph.D. program of the Department of Applied Behavioral Science and M.P.H. program of the Department of Preventive Medicine and Public Health. For information, see www.abs.c.ku.edu/graduate/joint_program.shtml.
ABSC 690 Practicum in Community Health and Development (1-6).
ABSC 691 Practicum in Community Health and Development, Honors (1-6).
ABSC 692 Practicum in Basic Research (3-6).
ABSC 693 Practicum in Historical and Conceptual Foundations (3-6).
ABSC 694 Practicum in Juvenile Problems (3-6).
ABSC 695 Special Practicum in: (3-6).
ABSC 696 Special Practicum in, Honors: (3-6).
ABSC 698 Special Research Practicum in: (3-6).
ABSC 699 Special Research Practicum in, Honors: (3-6).

ABSC 701 Parenting in Modern Society (3). The theoretical study of parenting and parent-child relationships, techniques for analyzing common parenting problems, designing appropriate interventions, fostering effective communication skills, understanding issues of diversity, and promoting parent education programs are some of the issues addressed in this course. Professional collaboration and support of families and children are emphasized throughout. Students develop analytical skills through reading, discussion, and application of theoretical and empirical research. (Formerly HDFL 701.) Prerequisite: ABSC/HDFL 160 or equivalent knowledge of child development or child psychology. LEC

ABSC 702 Practicum for Young Children (3). A survey of educational materials and activities that are appropriate for young children (birth to age 8). Students explore several components of effective curriculum (e.g., objectives, effective methods of activity presentation, teaching strategies) and learn to combine them to construct curriculums for a range of content and skill areas. By focusing on the functional components of curriculums, students learn to construct, critically evaluate, and modify them for both typically developing children and children with special needs. A BACC-approved course. (Formerly HDFL 702.) LEC

ABSC 703 Leadership in Early Education Programs: Theory and Research (3). Effective leadership skills and professional roles associated with the administration of early childhood services and programs are examined in this course. Theoretical principles, empirical research, and professional responsibilities inherent in the provision of quality service, including needs assessment, organizational skills, delivery systems, human resource management, communication skills, grant writing, legal and ethical considerations, conflict resolution, and advocacy are explored through readings, discussion, and assigned projects. Not open to students who have completed ABSC 555. (Formerly HDFL 677.) Prerequisite: ABSC/HDFL 160 or equivalent knowledge of child development or child psychology. LEC

ABSC 704 Research Practicum in Clinical Child Psychology (3). This course provides students in the Clinical Child Psychology program with the opportunity to enhance and consolidate their research activities by fulfilling one of the elective cluster course requirements. This practicum involves a contract with a research adviser and the program director. The contract includes definable products and dates for completion to prepare research for submission for publication, development, and grant proposal, or conduct additional research project independent of other requirements in the program. The course is not to be taken as an overload, but is to be part of a full-time course schedule. May be repeated. (Same as PSYC 704.) (Formerly HDFL 704.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

ABSC 705 Pediatric Psychology (3). Discussion of behavior problems commonly encountered in the pediatric population, including reviews of data-based methodologies for remediation. Topics include general child rearing skills, bedtime problems, enuresis, encopresis, toilet training, self-injurious behavior, temper tantrums, behavior in community settings, child abuse, psychotropic drugs for children, adolescent behavior problems and selection of children’s play materials. (Formerly HDFL 705.) Prerequisite: ABSC/HDFL 160, ABSC/HDFL 632, or PSYC 602. LEC

ABSC 706 Special Topics in Clinical Child Psychology: (1-3). A course offering detailed discussion of the literature and research methods of a special topic within clinical child and pediatric psychology. Topic and instructor may change by semester and will be announced in the Schedule of Classes. May be repeated. (Same as PSYC 706.) (Formerly HDFL 706.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

ABSC 709 Biology and Behavior (3). A course on the role of physiology and anatomy in behavior, with an emphasis on their participation in the basic behavioral processes and in typical and atypical behavioral development. The course also addresses issues in measurement and current research. (Formerly HDFL 709.) Prerequisite: ABSC/HDFL 796; ABSC/HDFL 798 recommended. LEC

ABSC 710 Community Health and Development (3). This course extends knowledge and skills for addressing issues in community health and development (e.g., substance abuse, adolescent pregnancy, child and youth development, prevention of violence). Students learn core competencies such as analyzing community problems and goals, strategic planning, intervention, and evaluation, and then apply these skills to issues that matter to them and to the communities they serve. (Formerly HDFL 710.) (Same as GINS 871.) LEC

ABSC 718 Experimental Problems in Community Settings (1-5). Research in the experimental design and analysis of community settings. No more than 10 hours total. (Formerly HDFL 716.) Prerequisite: Instructor permission. RSH

ABSC 719 Experimental Field Work in Community Settings (1-5). Instruction in the methods and techniques of the experimental design and analysis of community settings through supervised participation in established research programs. Emphasizes the techniques of gathering original experimental data. No more than 10 hours total. (Formerly HDFL 719.) Prerequisite: Instructor permission. RSH

ABSC 721 Biological Bases of Mental Retardation (4). This course deals with the biological underpinnings of mental retardation. Retardation is classified as a medical syndrome, rather than by behavioral patterns, but behavioral peculiarities are addressed where relevant. Attention is directed to both genetic causes such as the chromosomal anomalies (e.g., Mongolism) and molecular and metabolic errors (e.g., phenylketonuria), as well as to the environmentally produced retardation by nutritional deficiency, prenatal rubella, and brain trauma. (Formerly HDFL 721.) Prerequisite: One course in biology or equivalent. LEC

ABSC 723 Adolescent Adjustment (3). An overview of adolescence with primary emphasis on various adjustment difficulties and respective therapeutic approaches. Content to provide perspectives on relevant practice, research, theory, and contemporary social forces. (Formerly HDFL 723.) Prerequisite: Instructor permission. LEC

ABSC 725 Research Methods and Application (3). Surveys research methods used to identify, describe, understand, and intervene on socially important problems occurring across the life span (e.g., early childhood, adolescence, elders) and in varied settings (homes, classrooms, group-care facilities, and communities). Discusses research methods and concepts (e.g., prediction, control, reliability, validity) within scientific, community, and behavior-therapy research paradigms. Focuses on research strategies regarding descriptive and experimental methods, direct and indirect measurement, graphic and statistical analysis, and single-subject and group experimental designs. Emphasizes ethical and social responsibility in research. Provides opportunities to read secondary and primary sources, develop research questions, write and present research proposals. (Formerly HDFL 725.) Prerequisite: Instructor permission. RSH

ABSC 730 Developmental Neurobiology (3). This course consists of lectures and discussion sessions on topics that describe the structural and functional maturation of the nervous system. The areas covered deal with the morphological, physiological, and biochemical changes in the developing central nervous system of vertebrates (including human infants), and with the interaction of the external environment with some of these maturational processes. Prerequisite: Introductory human development, psychology, or biology course. LEC

ABSC 735 Within Subjects Research Methodology and Direct Observation (3). A graduate level introduction to the logic of experimentation, direct observation strategies, and research conducted using individual (e.g., single subject) and time series experimental designs. An ABA-accredited and BACB-pre-approved course. (Formerly HDFL 735.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 742 Research in Gerontology (3-10). Original investigations of some unsolved problems relating to adult development and aging. (Formerly HDFL 742.) Prerequisite: Graduate standing or instructor permission. RSH

ABSC 756 Philosophical Bases of Early Childhood Education (3). Historical influences and current theoretical models of early childhood education are addressed through a survey and analysis of the literature. Not open to students who have completed ABSC 356. (Formerly HDFL 756.) Prerequisite: ABSC/HDFL 160 or equivalent knowledge of child development or child psychology. LEC

ABSC 765 Evaluating and Disseminating Scientific Material I (1-3). Intensive training in the evaluation and production of scientific critiques and reviews of current issues in the analysis of behavior, as disseminated through the media. May be repeated. (Formerly HDFL 765.) Prerequisite: Instructor permission. LEC

ABSC 787 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (e.g., psychology, biology, sociology, communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as AMS 767, COMS 785, PSYC 787, and SOC 767.) (Formerly HDFL 787.) LEC

ABSC 788 Designing Early Education Environments (3). This course reviews empirically-supported strategies for designing effective and socially valid care and education environments for young children with and without disabilities. Topics will include: early educational theory, individualized curricula and goal selection strategies, various intervention methodologies, professional roles associated with the administration of early childhood services and programs, and support of families and children are emphasized throughout. Students develop analytical skills through reading, discussion, and application of theoretical and empirical research. (Formerly HDFL 701.) Prerequisite: Instructor permission. RSH

The Research and Training Center on Independent Living studies and develops self-advocacy and independent living systems for people of all ages who have physical and developmental disabilities.
ABSC 796 Laboratory in Behavioral Development and Modification: The Analysis of Behavior (3). An introductory graduate laboratory course on the basic principles of behavior, and related procedures for producing behavioral change, with nonhuman subjects. Technical procedures have been addressed as well as the development of children in field, both normal and deviant. An ABA-accredited and BACBÆ pre-approved course. (Formerly HDFL 796.) Prerequisite: Instructor permission. LEC

ABSC 798 The Analysis of Behavior II: Conceptual Foundations, Advanced Principles, and Contemporary Issues (3). A graduate seminar on the conceptual, scientific, disciplinary, and professional foundations of behavior analysis, with an emphasis on the development of related instruction, techniques, and applications. The course addresses the history and philosophy, advanced behavioral principles, complex behavioral processes, analyses of various domains of behavior (e.g., emotion, language, cognition), the dimensions of analysis in applied behavior analysis, and current research addressing ethical, legal, cultural, empirical, and clinical aspects of research and practice. An ABA-accredited and BACBÆ pre-approved course. (Formerly HDFL 798.) Prerequisite: ABSC 796 or instructor permission. LEC

ABSC 801 Design and Analysis of Community Development Methods (1-6). An examination of principles and practices of community development and evaluation of methods used to promote community improvement. May be repeated if the content differs. (Formerly HDFL 801.) Prerequisite: Instructor permission. RSH

ABSC 804 Research in Community Health Promotion (1-6). Supervised, original investigation of behavioral approaches to community health promotion. May be repeated for credit. Students are graded S/F. (Same as LING 799, PSYC 799 and SPLH 799). (Formerly HDFL 797.) LEC

ABSC 805 Functional Behavioral Assessment (3). The strategies, tactics, and ethical foundations of assessment are presented in the larger context of behavioral assessment (e.g., nomothetic and idiographic approaches). Research articles relevant to indirect, descriptive, and experimental functional assessment approaches and assessment-based interventions are carefully reviewed to determine the appropriate conditions for each type of assessment and intervention. (Formerly HDFL 805.) Prerequisite: ABSC 796 and instructor permission. LEC

ABSC 806 On the Behavioral Assessment Practicum (1-6). This course provides supervised experience in the use of functional behavioral assessment in home, clinic, or educational environments with young children presenting problem behaviors. (Formerly HDFL 806.) Prerequisite: ABSC 805 and instructor permission. FLD

ABSC 807 Design and Evaluation of Community Health Promotion Methods (1-6). An examination of the methods used to develop and evaluate community health promotion programs. The course addresses topics of interest to participants, such as substance abuse or promotion of child outcomes. As appropriate, the course is focused on any combination of: literature research, research planning, and preparation conducting research, analyzing data, writing research reports, or preparing oral reports of complete research. Students are graded S/F. Prerequisite: Instructor permission. RSH

ABSC 809 Professional Issues: Clinical Child Psychology (1). Consideration of various professional problems confronting the child and family oriented scientist-practitioner, and in the development of a professional identity. Topics include critical issues, including ethical, legal, empirical, and clinical, such as the resolution of substance abuse or promotion of child outcomes. May be repeated for credit if the content differs. (Formerly HDFL 809.) Prerequisite: Instructor permission. RSH

ABSC 810 Introduction to Developmental Assessment (3). A course covering the general principles of developmental assessment from birth through adulthood, with special emphasis on the role of the examiner, history and philosophy of assessment, and the acceptance, reliability, and stability of results. Selected assessment techniques for infants, preschool children, elementary school children, adolescents, and adults are reviewed and evaluated for their utility, limitations, and applications. A critical analysis of assessment in general and particular assessment tools is made. (Formerly HDFL 810.) LEC

ABSC 811 Achievement and Intellectual Assessment in Clinical Child Psychology (3). Course covers the basic theory, research, administration, and reporting of psychological assessment of development, intelligence for children, adolescents, and adults within cultural and developmental contexts. The range of psychological instruments examined includes, for example, WIAT, K-ABC, WJ-1, S-B, WISC, WAIS, and WPPSI. (Same as PSYC 811.) Prerequisite: Graduate student in clinical child psychology. LEC

ABSC 812 Behavioral and Personality Assessment of Children (3). Lecture, laboratory, field work, and supervision. Theory and applications in the psychological evaluation of children with standardized assessment techniques. The administration, scoring, interpretation, and reporting of behavioral and personality functioning in children. (Formerly HDFL 812.) (Same as PSYC 812.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 813 Behavioral Science Research Proseminar (1-3). A master’s level presentation of principles, behavioral and scientific aspects of other formal presentations of completed empirical research, reviews of the literature, and other areas of scholarship; and engage discussion about contemporary empirical, conceptual, and professional issues in applied behavioral science. May be repeated for credit. (Total credit not to exceed 9.) (Formerly HDFL 813.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 814 Advanced Child and Family Assessment (3). Lecture, laboratory, field work, and supervision. Supervised experience in specialized psychological assessment applied for a variety of settings. Topics may include psychometric scales, consultation, rationalization, administration, analysis, and reporting of mental health functioning of children and families. Experience with clinical populations, communication with referral sources. (Formerly HDFL 814.) (Same as PSYC 814.) Prerequisite: Graduate student in clinical child psychology. LEC

ABSC 820 Advanced Child Development (3). A survey of the basic empirical research in the field of child development, covering intelligence, cognition, perception, attention, personality, social behavior, and socialization processes. These literatures are integrated with an emphasis on the development of clinical intervention approaches. (Same as PSYC 820.) Prerequisite: A course in child development or equivalent. LEC

ABSC 821 Behavior Analysis of Child Development (3). An advanced graduate seminar on the behavior-analytic approach to child development. Students examine the behavior-analytic view of child development and compare and contrast this approach with other systems for understanding development. Students also review and critically evaluate current and seminal literature related to several different developmental domains (e.g., motor, emotional, social, cognitive development) and explore implications for the applied behavioral sciences. An ABA-accredited and BACBÆ pre-approved course. (Formerly HDFL 821.) Prerequisite: ABSC 798 and consent of instructor. LEC

ABSC 822 Children and Public Policy (3). This course examines how public policies affect the development of children. Includes examination of child and family policy in the United States and other countries, policy-related research on children, major policy issues affecting children, and child advocacy. (Formerly HDFL 822.) Prerequisite: Instructor permission. LEC

ABSC 824 Treatment of Severe Learning Problems (3). The course reviews new approaches to working with persons with retardation and autism; theoretical orientations and how they affect implementation of procedures; and current research outcomes in various developmental areas of persons with retardation. It covers approaches used with persons through the life span, from childhood through adulthood. Course may be repeated if the content differs. (Formerly HDFL 824.) LEC

ABSC 825 Social Development (3). A lecture and discussion course in social development. It includes such topics as theoretical approaches to the study of social development, as well as implications of research on early intervention,儿童 aggression and prosocial behavior, child abuse and neglect, family violence, child care, and the media. (Same as PSYC 825.) (Formerly HDFL 880.) Prerequisite: A course in child psychology or development. LEC

ABSC 828 Research in Early Intervention with Children (3). A seminar on current issues in assessment and intervention for young children who are at risk for or who have special needs. Provides foundation for evaluating and understanding research in early intervention. Includes historical, conceptual and legislative underpinnings of early intervention, methodological issues in early intervention research, best practice standards, and applications to social, language, and pre-academic domains. (Formerly HDFL 828.) LEC

ABSC 834 Directed Readings in Community Health Promotion (1-5). Supervised research in areas of community health promotion methods and programs. An ABA-accredited and BACBÆ pre-approved course. (Formerly HDFL 834.) RSH

ABSC 837 Advanced Study of People with Disabilities (3). This course reviews major approaches in identifying disability pathogenesis and explores the biological bases of selected congenital physical disabilities, and etiologies of selected acquired physical disabilities. Rehabilitation approaches and the role of scientist-practitioners in working with people with disabilities are also discussed. This course may be repeated if the content differs. (Total credit not to exceed 9.) (Formerly HDFL 837.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 840 Theoretical Concepts of Human Development and Child Care Practice (3). Basic introduction to treatment concepts and procedures related to child development and the child-care practitioner. The course is designed to provide a theoretical framework that is effective in dealing with various types of child deviancy. (Formerly HDFL 840.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 841 Legal, Ethical, and Professional Issues in Applied Behavioral Science (1-3). Seminar designed to provide an overview of topics such as principles guiding research with humans, human subjects procedures, use of animal subjects, deception in research, duties to refer, informed consent in special populations, data ownership and sharing, bias and fraud in data collection and analysis, scientific communication, professional communication, publication authorship, duplicate or fragmented publication, plagiarism, conflicts of interest, reporting misconduct, vita preparation, and job search strategies. A BACBÆ pre-approved course. (Formerly HDFL 841.) Prerequisite: Graduate standing in applied behavioral science. LEC

ABSC 845 Rules of Evidence for Applied Research (3). A course on experimental problems specific to research on socially significant behaviors of humans. Emphasis is on editing and critiquing research articles of the type submitted for publication in applied research journals. (Formerly HDFL 845.) LEC

ABSC 846 Practicum in Clinical Child Psychology I (1-3). Lecture, laboratory, field work, and supervision. Psychological evaluation and treatment of children and their families; supervised, progressive experience in psychological intervención in clinical child psychology. (Same as PSYC 846.) (Formerly HDFL 846.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 847 Practicum in Clinical Child Psychology II (1-3). A continuation of ABSC 846/PSYC 846. (Same as PSYC 847.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 848 Applied Gerontology: Theory and Intervention (3). A survey of intervention research in gerontology. Program evaluations designed to determine the effectiveness of community-based interventions, current social service delivery practice, and contemporary social policies are examined. An ABA-accredited and BACBÆ pre-approved course. (Formerly HDFL 848.) LEC

ABSC 856 An Interdisciplinary Approach to Intervention with the Handicapped (3). This course surveys knowledge from various disciplines that address develop-
mental disabilities across the life span. Its focus is on designing strategies for individual intervention and treatment programs by goals, designing systems, developing interventions, and disseminating products from applied behavioral research. Students use examples from their own applied research. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 871.) LEC

ABSC 865 Applied Behavioral Analysis in Complex Organizations (3). An examination of the theory, principles, and methods of behavior analysis and their application to problems of human behavior in complex organizations such as businesses, industries, human service organizations, and governments. (Formerly HDFL 888.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 866 Service System and Consumer Issues in Developmental Disabilities (3). This course provides a service-system perspective on developmental disabilities. Students learn (a) how service systems have developed for people with developmental disabilities; (b) about service systems from the perspective of agency administrators, program evaluation, and public and private payment systems (e.g., health insurance, Medicaid, Medicare, CHIPs, Title V); and (c) from consumers, themselves, about how they face in obtaining needed services. Finally, students learn about advocating for service-system change at a consumer, program, and policy level. Prerequisite: Graduate standing or instructor permission. LEC

ABSC 870 Practicum I in Behavioral Psychology (1-6). Instruction and supervised laboratory or field work for master’s students. Practica are offered by different instructors on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 871 Practicum I in Behavior Analysis (1-6). Instruction and supervised laboratory or field work for master’s students. Practica are offered by different instructors on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Schedule of Classes. (Formerly HDFL 873.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 872 Practicum I in: (1-6). Instruction and supervised laboratory or field work for master’s students. Practica are offered by different faculty members on different topics; may be repeated for credit if the content is different. Topics and instructors are announced in the Schedule of Classes. Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 873 Practicum in Educational Psychological/Rehabilitative Services: (3-6). This course is for students who wish to complete practicum experiences in services related to persons with retardation, autism, or physical disabilities in programs in various settings, such as the Ann Sullivan Center in Lima, Peru and the Algeria School in Paraguay. The course is designed to give interested students opportunities to work with professionals in these programs on a semester or summer basis. The course consists of participation in professional activities associated with the practicum program and a report of these activities to the instructor. (Formerly HDFL 789.) Prerequisite: Instructor permission. LEC

ABSC 874 Practicum in Consumer Evaluation of Behavior Programs (3-6). A practicum course designed to give students an understanding of the knowledge base, and practical experience in the conduct of consumer evaluations for behavioral treatment programs. (Formerly HDFL 855.) Prerequisite: Instructor permission. LEC

ABSC 875 Practicum in Community Health Promotion (1-6). A practicum course designed to give students an understanding of the knowledge base, and practical experience in the implementation of community health promotion projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 808.) Prerequisite: Instructor permission. LEC

ABSC 876 Practicum in Community Development (1-6). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community improvement projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 802.) Prerequisite: Instructor permission. LEC

ABSC 877 Advanced Practicum in Gerontology (1-6). Supervised practical experience in working with elders in home, community, or institutional settings. Regular individual conferences with faculty are used to evaluate student progress. (Formerly HDFL 840.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 880 Early Childhood Practicum for Allied Professionals (1-6). Professionals in fields such as journalism, social welfare, and psychology may have career interests that include work with or on behalf of young children. This practicum provides students with individualized opportunities to work with young children in a group setting in order to gain clinical professional skills. (Formerly HDFL 790.) Prerequisite: Instructor permission. LEC

ABSC 881 Early Childhood Care and Intervention Practicum I (1-6). A course covering the specification of learning goals and the implementation and evaluation of curriculum design management of groups of young children. May be repeated for no more than a total of six credit hours. (Formerly HDFL 791.) Prerequisite: Instructor permission. LEC

ABSC 882 Early Childhood Care and Intervention Practicum II (1-6). A course to assess and teach skills in diagnosis and evaluation of particular problems in the developmental process of young children (2-5 years of age), and to design and implement interventions. May be repeated for no more than a total of six credit hours. (Formerly HDFL 792.) Prerequisite: ABSC 791 and instructor permission. LEC

ABSC 883 Early Childhood Administration Practicum (1-6). Experiences in understanding and developing parent satisfaction with care arrangements for their children, providing services to personnel responsible for care and development of young children, and/or maximizing use of available services for young children on their behalf. May be repeated for no more than a total of six credit hours. (Formerly HDFL 793.) Prerequisite: ABSC 791 and instructor permission. LEC

ABSC 884 Early Childhood Early Intervention Practicum (1-6). Laboratory teaching in an early childhood classroom that includes children who are developmentally delayed, demonstrate behavioral or learning difficulties, or have other developmental disabilities. Experience includes individualized programming for children with special needs, as well as group management and group curriculum planning. May be repeated for no more than a total of six credit hours. (Formerly HDFL 794.) Prerequisite: ABSC 791 and instructor permission. LEC

ABSC 885 Early Childhood Teacher Education Practicum (1-6). A course covering observation and evaluation in supervising staff who work in programs for young children. Supervision includes orientation, monitoring, and evaluating staff performance; opportunities for interaction with other professionals; experience in facilitating staff communication; and consulting on research problems. (Formerly HDFL 795.) Prerequisite: ABSC 791 and instructor permission. LEC

ABSC 886 Developmental Assessment Practicum: (1-6). This course provides direct experience in the developmental assessment of a selected age group, such as infants, preschool and elementary children, adolescents, or adults. It may be repeated for no more than a total of six credit hours. (Formerly HDFL 810.) Prerequisite: HDFL 810 or an equivalent course. LEC

ABSC 887 Clinical Practicum in Pediatric Psychology (1-6). Supervised experience in pediatric patients referred for behavior problems, including, for example, temper tantrums, enuresis, encopresis, and hyperactivity. Also includes evaluation and treatment of children with commonly encountered behavior problems. In addition, students observe pediatric staff performing appropriate physical exams and observe the interaction between the medical staff and the pediatric psychologist. (Formerly HDFL 823.) Prerequisite: ABSC 705 and instructor permission. LEC

ABSC 888 Diversity Issues in Clinical Psychology (3). Review of individual differences pertaining to culture, ethnicity, race, gender, sexual orientation, age, etc., as these have an impact upon theory, research, assessment, and treatment issues in clinical psychology. (Same as PSYC 888.) Prerequisite: Graduate status in clinical psychology, or consent of instructor. LEC

ABSC 890 Seminar in: (3). A seminar for master’s level students. It examines basic and applied research literatures in specialized fields of applied behavioral science. May be repeated for credit if the content differs. (Formerly HDFL 811.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 891 Research in: (1-6). Supervised research investigations in basic or applied behavioral science for master’s students. The course introduces observational measurement, research methods and designs, and the conduct of research in the behavioral sciences. May be repeated for credit if the content is different. (Formerly HDFL 800.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 892 Readings in: (1-3). An individual, supervised study of recent research and scholarship for master’s students. The course emphasizes current scholarship in selected areas of basic and applied behavioral science and its conceptual foundations. Designed for students whose needs cannot be met in other courses. May be repeated for credit if the content differs. (Formerly HDFL 833.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 893 Special Topics in: (1-3). A research and readings course for master’s students. It allows them to concentrate their studies on selected basic and applied problems in behavioral science and carry out independent research. May be repeated for credit if the content differs. (Formerly HDFL 790.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 894 Study Abroad Topics in: (1-3). A course designed to enhance international experience in topical areas related to behavioral science for master’s students. May be repeated for credit if the content differs. Prerequisite: Graduate standing or instructor permission. LEC

KU's Schieflbusch Institute for Life Span Studies brings together scientists of diverse disciplines including psychology, psychiatry, speech pathology, sociology, education, biology, pharmacology, physiology and medicine to study human development from its genetic origins through the final stages of life.
ABSC 937 Master’s Thesis in Clinical Child Psychology (1-10). Supervised research for completing the thesis leading to master’s degree. (Formerly HDFL 897.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. RSH

ABSC 989 Master’s Thesis in Applied Behavioral Science (1-9). Supervised research for completing the thesis leading to master’s degree in applied behavioral science. May be repeated. (Formerly HDFL 899.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. TH

ABSC 900 Self-Control, Impulsivity, and Human Addictive Disorders (3). This course examines basic research designed to explore variables affecting animal and human decision making; particularly decisions classified as demonstrating impulsivity and self-control. The evidence for genetic and learning contributions to patterns of impulsive decision making will be explored, as will the relationship between impulsivity and addictive disorders. Prerequisite: Consent of instructor. LEC

ABSC 905 Psychopathology in Children (3). Diagnosis and treatment of psychological problems in childhood and adolescence. Preference given to graduate students in child clinical psychology, school psychology, and counseling psychology. (Same as PSYC 905.) Prerequisite: Fifteen hours of graduate credit in psychology or consent of instructor. LEC

ABSC 908 Psychotropic Drugs: Effects Through the Life Span (3). This course covers basic pharmacological concepts, neuropharmacological principles, and the therapeutic and adverse effects of psychotropic drugs. Prerequisite: Consent of instructor. LEC

ABSC 913 Behavioral Science Research Proseminar (1-3). A doctoral level professional seminar in which faculty and students present research proposals; offer formal presentations concerning research findings; and discuss relevant human and nonhuman animal research as well as other areas of scholarship; and engage discussion about contemporary empirical, conceptual, and professional issues in applied behavioral science. May be repeated for a total of eight credits. (Formerly HDFL 913.) Prerequisite: Graduate standing in behavioral science or instructor permission. LEC

ABSC 920 Seminar in Language Development (3). The course pertains to relevant research regarding infant speech development, vocabulary development, linguistic development, articulation development, and language retardation. (Same as SFPL 960.) Prerequisite: Consent of instructor. LEC

ABSC 921 The History and Systems of Psychology (3). An advanced graduate seminar on the history of psychology and its systems, and their relations to contemporary psychology. Pertinent issues in the history and philosophy of science are addressed (e.g., scientific revolutions), as are concerns in the historiography of psychology (e.g., prehistory). Prerequisite: Consent of instructor. LEC

ABSC 931 Verbal Behavior (3). An advanced graduate seminar on the analysis of the verbal behavior of the proficient speaker and the biological, environmental, and motivational factors affecting it. Structural and developmental issues, as well as implications for language training and remediation are integrated throughout. Critiques and rebuttals are examined, along with current empirical and conceptual advances in research and theory. An ABAAccredited and BACBÆpre-approved course. (Formerly HDFL 801.) Prerequisite: ABSC 798, advanced course work in psycholinguisitics, or instructor permission. LEC

ABSC 934 Directed Readings in Clinical Child Psychology (3-5). Designed to meet the needs of advanced students whose study in clinical child psychology cannot be bolstered by course offerings. Each student designs a reading program for whose work is desired in a specialized area of study. (Formerly HDFL 934.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. RSH

ABSC 935 Experimental Foundations of Applied Behavior Analysis (3). A graduate level introduction to basic behavioral research. This course surveys seminal and current research in the experimental analysis of behavior and relates this work to research and practice in applied behavior analysis. Topics include respondent conditioning, complex schedule performance, avoidance, stimulus control, and choice. Prerequisite: ABSC 798 and consent of instructor. LEC

ABSC 940 Measurement and Experimental Design for Applied Research (3). This is an advanced course on research methods helpful in the development, evaluation, and dissemination of effective and sustainable behavior-analytic programs. The course examines: (a) selecting non-reactive measures of staff implementation behaviors; (b) selecting effective and sustainable components of a staff management program; and (c) experimenting on the effectiveness and sustainability of the staff management program. Particular emphasis is placed on the principles of behavior that determine the maintenance of behavior and, therefore, the survival of behavioral programs in their post-research phase. Students read and discuss the literature on factors that promote or impede program survival. Students design and implement a program controlled experiment, examine the results in comparison to experimental data, and write a final research report. Prerequisite: ABSC 921, research design and statistical competency. LEC

ABSC 941 Teaching and Conference (3-6). This course is used by graduate students fulfilling the doctoral program teaching requirement. Students assist in class preparation and organization, teaching, grading, and office hours and are formally graded. For details, contact the Director of Graduate Studies. The course number will change to reflect the relationship with the faculty members they are assisting. Students enroll for 3 hours for the equivalent of a 25% assistantship and 6 hours for a 50% equivalent. (Formerly HDFL 941.) Prerequisite: Instructor permission. LEC

ABSC 942 Data Analysis in Applied Research (3). This course covers useful data analysis techniques for advanced doctoral students. The course introduces current statistical procedures commonly used with both large and single subject experimental designs. In addition to presenting specific data analysis techniques, the strengths and weaknesses inherent in the various techniques are carefully reviewed and evaluated. (Formerly HDFL 942.) Prerequisite: ABSC/HDFL 735 or HDFL 803 and an intermediate statistics course. LEC

ABSC 943 Advanced Practicum in Clinical Child Psychology III (1-3). Lecture, laboratory, field work, and supervision assignment. Advanced psychological intervention techniques for children, youth, and families; supervised progressive experiences in designing and implementing behavior-analytic intervention programs for behavioral and emotional problems. (Formerly HDFL 943.) (Same as PSYC 943.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of ABSC/HDFL 943 and 944. (Formerly HDFL 944.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 947 Advanced Practicum in Clinical Child Psychology V (1-3). A continuation of ABSC/HDFL 943 and 944. May be taken in more than one semester. (Formerly HDFL 947.) (Same as PSYC 947.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 951 The Analysis of Cognition (3). A graduate seminar on the behavior analysis of cognition. Topics include consciousness, attention, perception, memory, language, rule-governed behavior, problem-solving, decision-making, generativity, creativity, and beliefs and attitudes. Comparisons and contrasts are drawn among different theoretical orientations (information-processing, parallel-processing, nonmeditational theories). Prerequisite: ABSC 796, advanced course work in applied behavioral science or instructor permission. May be repeated for credit if the content differs. Prerequisite: ABSC 796. FLD

ABSC 961 Advanced Seminar in Applied Behavior Analysis: (1-3). An advanced seminar examining the literature and research methods in specialized areas of applied behavior analysis (e.g., development, disabilities, community health, organizational development). May be repeated for credit if the content differs. An ABAAccredited and BACBÆpre-approved course. (Formerly HDFL 971.) LEC

ABSC 963 Clinical Child Psychology Internship (1). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved clinical psychology field setting; supervision by qualified clinical child psychology faculty and staff psychologists. Graded on satisfactory/unsatisfactory basis. May be repeated for credit if the content differs. May be repeated for credit if the content differs. Prerequisite: Consent of instructor. FLD

ABSC 965 Evaluating and Disseminating Scientific Material II (1-6). Intensive instruction and supervised scientific writing on current issues in the analysis of behavior, as disseminated through the media. May be repeated. (Formerly HDFL 965.) Prerequisite: Instructor permission. LEC

ABSC 970 Practicum II in Behavioral Psychology (1-6). Advanced instruction and supervised laboratory or field work for doctoral students beyond ABSC 872. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. FLD

ABSC 971 Practicum II in Behavioral Psychology: (1-6). Advanced instruction and supervised laboratory or field work for doctoral students beyond ABSC 871. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. FLD

ABSC 972 Practicum III in Clinical Child Psychology (1-6). Advanced instruction and supervised field work for doctoral students beyond ABSC 872. May be repeated for credit if the content differs. Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 976 Therapeutic Interventions with Children (3-5). Clinical approaches to the therapeutic treatment of children with special emphasis on research findings and laboratory techniques for the systematic analysis of the student's behavior and parent-child interactions. Prerequisite: ABSC 951. FLD

ABSC 989 Methods of Obtaining External Research Funding (1-3). The objective of this course is to demystify this process and prepare participants to submit their first independent research grant application. Participants learn about the characteristics of different funding mechanisms and agencies, the characteristics of successful and unsuccessful application strategies, how to turn an initial research idea into a competitive application, ethical issues that influence each stage of the development and submission process, and the nuts and bolts of grant development and management. Specific activities include critiquing an actual NIH grant application, participating in a mock review panel, and developing an actual grant application. LEC

ABSC 990 Advanced Seminar in: (3). An advanced seminar for doctoral students. It examines basic and applied research literatures in specialized fields of applied behavioral science. May be repeated for credit if the content differs. (Formerly HDFL 930.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 992 Advanced Readings in: (3). An advanced seminar for doctoral students. Advanced reading and research in a specialized area of study. May be repeated for credit if the content differs. Prerequisite: ABSC/HDFL 735 or HDFL 803 and an intermediate statistics course. LEC

ABSC 993 Advanced Special Topics in: (1-3). An advanced research and reading course for doctoral students. It allows them to concentrate their studies on se-
selected basic and applied problems in behavioral science and carry out independent research. May be repeated for credit if the content differs. (Formerly HDFL 998.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. RSH

**ABSC 994 Advanced Study Abroad Topics in:_____** (1-6). An advanced course designed to enhance international experience in topic areas related to behavioral science for doctoral level students. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. RSH

**ABSC 998 Doctoral Dissertation in Clinical Child Psychology** (1-10). Research experience making an original contribution to literature in clinical child psychology. (Same as PSYC 998.) (Formerly HDFL 998.) RSH

**ABSC 999 Doctoral Dissertation in Behavioral Psychology** (1-9). Advanced supervised research that makes an original, empirical contribution to the literature in applied behavioral science leading to a doctoral degree in behavioral psychology. May be repeated. (Formerly HDFL 999.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. THE

### Art

See Visual Art in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

### Art History

See History of Art.

### Astronomy

See Physics and Astronomy.

### Atmospheric Science

See Geography.

### Biochemistry

See Biological Sciences: Molecular Biosciences.

### Bioinformatics

**Director:** Ilya Vakser, vakser@ku.edu, (785) 864-1057  
**Graduate Director:** Wonpil Im, wonpil@ku.edu, (785) 864-1993  
**Multidisciplinary Research Bldg., 2030 Becker Drive, Room 200 Lawrence, KS 66047-1620  
**www.bioinformatics.ku.edu, tpowers@ku.edu, (785) 864-1057**  
**Professors:** Vakser, Verkhivker  
**Associate Professors:** Zhang  
**Assistant Professors:** Im, Karanicolas  
**Bioinformatics Teaching Faculty:** Ackley, Camarda, Chen, Cohen, DeGuzman, Dentler, Egan, Fang, Fischer, Hanzlik, Harsay, Heckert, Huan, Kuczera, Lundquist, Lushington, Middaugh, Mushigian, Pasik-Duncan, Pourque, Richter, Rivera, Schoeneich, Smith, Suprenant, Takusagawa, Tang, Timmermann, Torres, Van, Ward  
**Bioinformatics is an interdisciplinary science at the interface of biology, chemistry, medicine, mathematics, and computer science. Its goal is development and application of computational approaches to studies of life processes and improvement of human health. The Bioinformatics Program recruits students with bachelor’s or master’s degrees who made their career choice to become professional bioinformaticians. The Ph.D. degree in bioinformatics requires successful completion of formal courses and demonstration of accomplishments in basic research, qualifying examinations, scientific writing, and formal presentations of research data.**  
**The courses below are available for graduate credit.**

#### Bioinformatics Courses

**BINF 701 Bioinformatics I** (5). First semester of a two-semester course in bioinformatics and computational biology. Topics include basic concepts of bioinformatics and molecular modeling, bioinformatics databases, computational tools and modeling methods, protein sequence and structure alignment, conformational analysis, secondary structure determination, tertiary structure modeling (homology, threading, ab initio, molecular dynamics and Monte Carlo-simulations, protein folding and dynamics), as well as student presentations of material from current papers in the field of study and their own on-going research for discussion and critique. Prerequisite: College introductory biochemistry (no requirement for specific courses), math, and computer courses or concurrent enrollment in such courses and consent of instructor. (Same as PHCH 701.) LEC

**BINF 702 Bioinformatics II** (5). Second semester of a two-semester course in bioinformatics and computational biology. Topics include protein quaternary structure modeling (protein-protein/DNA/small ligand docking, binding, computer-aided drug design), protein structure-function relationships, biological membranes (structure and function of integral membrane proteins, protein-membrane and protein-protein interactions in membranes), phylogenetic trees, modeling of genome-wide protein interaction networks based on structure, sequence, experimental and data-mining, as well as students presentations of material from current papers in the field of study and their own on-going research for discussion and critique. (Same as PHCH 702.) Prerequisite: BINF 701. LEC

**BINF 709 Topics in:_____** (1-3). Advanced courses on special topics in bioinformatics, given as need arises, including lectures, discussions, readings, or laboratory. Students may select sections according to their special interests. LEC

### Biological Sciences

The Biological Sciences comprise the Departments of Ecology and Evolutionary Biology and Molecular Biosciences, as well as KU’s Undergraduate Biology Program (KUB) and the Genetics Program. Both departments offer programs leading to Master of Arts or Doctor of Philosophy degrees. The departments offer graduate degrees in biochemistry and biophysics; molecular, cellular, and developmental biology; microbiology; ecology and evolutionary biology; entomology; and botany. For information on degree requirements, see the descriptions under the individual departments.

#### Organization for Tropical Studies

KU is a charter member of the Organization for Tropical Studies, which provides tropical field experience and training in Costa Rica. Advance application and enrollment are necessary. Interested students should see their advisers at least four months before undertaking study in Costa Rica.

#### Biological Sciences: Ecology and Evolutionary Biology

**Interim Chair:** Christopher Hauffler, vulgare@ku.edu, (785) 864-3255  
**Haworth Hall, 1200 Sunny side Ave., Room 2041 Lawrence, KS 66045-7566, www2.ku.edu/~eeb, (785) 864-5887**  
**Graduate Program Adviser: Bryan Foster, bfoster@ku.edu, (785) 864-4361**  
**Graduate Admissions Adviser: Mark Mort, memort@ku.edu, (785) 864- 5706**  
**Graduate Program Coordinator: Jaime Keeler, jrkeeler@ku.edu, 2041C Haworth Hall, (785) 864-2362**  
**Professors:** H. Alexander, deNoyelles, Engel, Fautin, Hauffler, Jander, Krishtalka, C. Martin, L. Martin, Martinko, Peterson, V. Smith, Soberon, E. Taylor, O. Taylor, T. Taylor, Thorp, Trueb, Wiley  
**Courtesy Professors:** Burg, Busby, Freeman, Hagan, Huggins, Kindscher, Lieberman  
**Adjunct Professors:** Crawford, Tourtellot  
**Professors Emeriti:** Armitage, Byers, Cuther, Duellman, Fitch, Humphrey, Johnston, Lichtwardt, Michener, Schultz, Slade, Torres  
**Associate Professors:** Billings, deBoer, Foster, Kelly, Mort, Orive, Pierotti, D. Smith, Timm, Ward  
**Assistant Professors:** D. Alexander, Ballantyne, Blumenstein, Brown, Cartwright, Chaboo, Gleason, Hileman, Holder, Jensen, Moyle, Short  

The department comprises a large number of biologists with a variety of research interests. Particular strengths are in phylogenetics, paleontology, biodiversity, population biology, taxon-focused studies (e.g., entomology), and applied ecology (both...
terrestrial and aquatic). The department offers graduate study leading to Master of Arts and Doctor of Philosophy degrees in botany, entomology, and ecology and evolutionary biology. General information about the department, faculty, current graduate students, admission, and financial support may be found at the Web address above.

Departmental physical facilities include laboratories, working museum collections, and field-study sites near the university. Most laboratory facilities are in Dyche Hall, Higuchi Hall, McGregor Herbarium, Haworth Hall, and the Public Safety Building. The museum collections are a part of the Biodiversity Institute and include nearly 1 million vertebrate specimens, an estimated 1 million invertebrate fossils (exclusive of microfossils), 3.2 million pinned insects, and numerous mites and minute insects preserved in liquid. The Biodiversity Institute also includes an extensive collection of fossil plants and 300,000 pressed specimens.

The University of Kansas Field Station and Ecological Reserves (KSR) offers a diversity of habitats and facilities for local field research. These include the Fitch Natural History Reservation, a 590-acre site for long-term ecological succession studies; the Rockefeller Experimental Tract, 160 acres of prairie; the Baldwin Woods, 202 acres of deciduous forest; the John H. Nelson Environmental Study Area, a 560-acre site with more than 100 experimental ponds and a biotic succession/habitat fragmentation research facility; and the Hall Nature Reserve, a site for native habitat restoration and conservation studies. In 2008, KSR opened the Kenneth and Katie Armitage Education Center at its headquarters building, which includes a large classroom/meeting room, two laboratories, a lobby/great room, full kitchen, offices, and shower and laundry facilities.

The Kansas Biological Survey, a state research agency at KU, operates innovative laboratories in support of aquatic ecotoxicology and water chemistry, floral and faunal inventories, remote sensing, and geographic information systems technologies.

Faculty and students also carry out field studies in diverse areas of the world. KU is a member of the Organization for Tropical Studies, which provides tropical field experience and training in Costa Rica and South America.

**Admission**

General information on admission and financial aid is available online at [www2.ku.edu/~eeb](http://www2.ku.edu/~eeb). Send inquiries to the graduate program coordinator. The departmental graduate admissions committee reviews the record of each applicant. The committee considers the candidate’s overall undergraduate record in the context of the institution(s) from which the record was received. A minimum overall grade-point average of 3.0 on a 4.0 scale is required for regular admission. The student’s academic record in the specialization is also important. The master’s degree is not a prerequisite for entering a Ph.D. program. Students must provide a certified score report from the Graduate Record Examination for the general test (scores from the GRE biology subject test are optional). Non-English-speaking applicants must provide certified scores from the Test of English as a Foreign Language or from the International English Language Testing System. Faculty recommendations, honors, awards, undergraduate research experience, publications, and professional experience are considered.

Motivation, enthusiasm, and realistic career goals as evidenced by the applicant’s essay are particularly important.

Students must have a faculty sponsor before admission. Applicants are encouraged to correspond with one or more potential sponsors when they apply. The number of students admitted is limited. Qualified candidates may be denied admission because of lack of a faculty sponsor, financial support, or research facilities.

Submit your application online at [www.graduate.ku.edu](http://www.graduate.ku.edu). Send all other requested application materials, including official transcripts, to the address below:

**The University of Kansas**

**Department of Ecology and Evolutionary Biology**

Attn: Graduate Coordinator

Haworth Hall, 1200 Sunnyside Ave., Room 2041

Lawrence, KS 66045-7566

**Time Constraints**

A student beginning graduate study with only a bachelor’s degree should complete all work for the master’s degree in two or three years after initial enrollment at KU. A student beginning graduate study with a master’s degree in the biological sciences should complete all work for the doctoral degree within four to five years. A student beginning graduate study with only a bachelor’s degree in the biological sciences should complete all work for the doctoral degree within five to six years.

The maximum tenure for EEB graduate students follows KU’s regulations. Master’s students are allowed a maximum of seven years to complete the degree program, and doctoral students are allowed eight years. If a student first earns an M.A. from KU before beginning a doctoral program, he or she has a total of 10 years to complete both degrees. Petitions to extend the time limits must be approved by the student’s advisory committee and forwarded to the EEB graduate program committee for consideration before being forwarded to the College Office of Graduate Affairs for approval.

As required by the university, doctoral students must complete the equivalent of at least three academic years of full-time graduate study. This may include the time spent earning a master’s degree. Students who work as teaching or research assistants or have other obligations may need more than three years.

**M.A. Degree Requirements: Ecology and Evolutionary Biology, Botany, or Entomology**

**Options I (Thesis) and II (Nonthesis).** Two options leading to the M.A. degree are offered. Option I (Thesis) is research-oriented and requires a thesis or its equivalent. Option II (Nonthesis) emphasizes broader graduate training rather than concentration on research. For each option, the advisory committee must have at least three Graduate Faculty members, two of whom must be in EEB. No faculty member outside the department is required.

**Required Course Work for Master’s Students.** Most course work requirements are identified during the student’s PAC meeting. Students are expected to take graduate-level courses (or have equivalent knowledge) in ecology, evolution, and systematics. Students must attend and enroll in BIOL 701 Topics in Ecology.

---

A KU professor, with the help of a co-worker, made the 1981 discovery of a white-headed flightless steamer duck, the first species of duck found since 1917.

Two KU professors have been studying the spread and adaptation of the African honeybee in South America.

KU’s 590-acre Fitch Natural History Reservation is a nature preserve that has been protected from disturbance for 60 years.
and Evolutionary Biology for the first semester of graduate education, typically in the fall semester (they are expected to attend departmental colloquia in subsequent semesters).

Additionally, students must take a graduate-level course in statistics (such as BIOL 841 Biometry I) or demonstrate equivalent background knowledge. Students pursuing the thesis option must enroll in a minimum of 1 hour of thesis research (BIOL 899). A student’s advisory committee may add course requirements to a student’s degree program during annual meetings.

Master’s students must meet a credit-hour-completion requirement. Those in the thesis program must complete a minimum of 30 graduate-level credit hours with no more than 10 of the 30 from enrollment in thesis, research, or advanced study hours. Those in the nonthesis program must complete a minimum of 36 graduate-level credit hours with no more than 12 of the 36 from enrollment in thesis, research, or advanced study hours.

Students seeking an M.A. in botany must take a graduate-level course in at least two of the following three areas: (1) plant ecology; (2) plant systematics or morphology; (3) plant development or physiology.

Students seeking an M.A. in entomology must take BIOL 500 Biology of Insects and BIOL 502 Laboratory in Insect Biology and Diversity unless they have taken equivalent courses. Students who have taken a course equivalent to BIOL 502 elsewhere are still encouraged to take BIOL 502 to familiarize themselves with the local insect fauna. In addition, students must take at least one of the following courses: BIOL 708 External Morphology of Insects, BIOL 711 Insect Systematics, or BIOL 716 Insect Physiology and Internal Morphology.

**Master’s Final Examination.** Students working toward an M.A. degree (both thesis and nonthesis options) must take a final general oral examination in the semester of final enrollment in course work when the thesis work (or library investigation, etc.) is nearing completion. This examination is administered by three members of the Graduate Faculty, two of whom must be in EEB; it should not be taken on the same day as the student’s research presentation. The master’s final examination is not a defense of the thesis, although questions directly or indirectly related to the student’s research may arise. Its structure is similar to that of the doctoral oral comprehensive examination, although the length of the examination and depth and breadth of knowledge required of the student are less than that expected in a doctoral examination. To pass the master’s final examination, a student must receive a majority of passing votes from the examining committee. Under special circumstances, modifications of the standard procedures for the master’s final examination are possible, and students may petition the departmental Graduate Program Committee for consideration of such exceptions.

**Research.** Upon completion of their work, students in M.A. degree Option I must submit a thesis on original research and present their research results to the public in standard departmental colloquium format. The presentation is not required to be a defense of the thesis and should not be held on the same day as the student’s final exam. The thesis must be submitted electronically to Graduate Studies. Instructions for formatting and submitting the electronic thesis are at [www.graduate.ku.edu](http://www.graduate.ku.edu). The thesis must also be submitted to the department on CD in either PDF or Word format. Paper copies of the title and acceptance pages containing the signatures of the examining committee members must be submitted to both the College Office of Graduate Affairs and the department.

Students in M.A. Option II (nonthesis) must conduct research with one or more faculty members involving work on a research problem that requires use of literature, laboratory techniques, or field techniques. Nonthesis students must submit a committee-approved, comprehensive written report to the advisory committee and to the department. Examples of research problems that could be the basis of the written report include a literature review of a critical issue in a scientific discipline, original research, or other creative activity approved by the advisory committee. The report must be submitted to the department on CD in either PDF or Word format. A paper copy of the title page containing signatures of the advisory committee members also must be submitted.

**Ph.D. Degree Requirements: Ecology and Evolutionary Biology, Botany, or Entomology**

**Required Course Work for Doctoral Students.** Most course work requirements are identified during the student’s PAC meeting. Students are expected to take graduate-level courses (or have equivalent knowledge) in the disciplines of ecology, evolution, and systematics. Students must attend and enroll in BIOL 701 Topics in Ecology and Evolutionary Biology for the first semester of graduate education, typically in the fall semester (they are expected to attend departmental colloquia in subsequent semesters). Doctoral students must take a graduate-level course (or have equivalent knowledge) in statistics (such as BIOL 841 Biometry I). Completion of at least 1 credit hour in BIOL 999 Doctoral Dissertation is required. A student’s advisory committee may add course requirements to a student’s degree program during annual meetings.

In addition, students seeking a Ph.D. in entomology must take BIOL 500 Biology of Insects and BIOL 502 Laboratory in Insect Biology and Diversity unless they have taken equivalent courses. Students who have taken a course equivalent to BIOL 502 elsewhere are still encouraged to take BIOL 502 to familiarize themselves with the local insect fauna. In addition, students must take all three of the following courses: BIOL 708 External Morphology of Insects, BIOL 711 Insect Systematics, and BIOL 716 Insect Physiology and Internal Morphology.

Students seeking a Ph.D. in botany must take a graduate-level course in each of the following three areas: (1) plant ecology; (2) plant systematics or morphology; (3) plant development or physiology. In addition, the student must take a specialty seminar focusing on plant-related topic.

**Assistantships.** Doctoral students must complete at least two semesters of half-time supervised teaching, curatorial, or research assistantships. Alternative experiences may be approved by the student’s advisory committee.

**Foreign Language or Other Research Skills.** Doctoral students can fulfill the FLORS requirement in one of four ways: (1) exhibiting reading knowledge of two foreign languages, (2) exhibiting fluency in a foreign language, (3) exhibiting reading...
knowledge of one foreign language and fulfilling the requirements of one other research skill, or (4) fulfilling the requirements of two other research skills. Upon completion of a FLORS requirement, students should contact the departmental graduate coordinator so that appropriate documentation may be added to the student’s permanent file.

1. Reading Knowledge of a Foreign Language: Students without prior experience must enroll in a 3-credit-hour reading course in a major modern language and achieve a final grade of A or B. Students with prior knowledge of a language may choose instead to translate, in a set amount of time, a pre-approved passage from the scientific literature in that language. Approval of the foreign language requirement must be obtained from the instructor of the reading course, from an appropriate representative of a language department, or from a qualified individual from EEB or another department. Examples of EEB faculty members who are qualified for specific languages are listed below:

   For Spanish: Professor Town Peterson
   For German or French: Professor Rudolf Jander

2. Fluency in a Foreign Language: If the student is a native English speaker (or, in the rare event that the student is not a native English speaker and chooses a non-native language other than English), fluency in reading, writing, and speaking a foreign language is determined by a faculty member in the department (whenever possible, otherwise in an appropriate language department) who is fluent in the chosen language. The faculty member submits a letter to the EEB graduate education committee indicating that the student is fluent. If the student is not a native English speaker, the student’s committee may determine fluency in reading, writing, and speaking English. Following the committee’s determination, the student’s adviser provides a letter to the EEB graduate education committee indicating that the student is fluent.

3. Other Research Skills. Other research skills must be consistent with the Graduate Studies description: “a research skill component distinct from, but strongly supportive of, the dissertation.” These skills may be attained either through course work or through completion of a project. In either case, the ORS must be approved by the EEB graduate program committee. A list of previously approved ORS appears on the EEB Graduate Student Handbook (www2.ku.edu/~eeb). Other courses or projects can be added to this list by petitioning the EEB graduate program committee for pre-approval.

   Students with no prior experience using the chosen research skill should take a course recommended by the department. Students with experience might choose instead to translate, in a set amount of time, a pre-approved passage from the scientific literature in that language. Approval of the foreign language requirement must be obtained from the instructor of the reading course, from an appropriate representative of a language department, or from a qualified individual from EEB or another department. Examples of EEB faculty members who are qualified for specific languages are listed below:

   For German or French: Professor Rudolf Jander

   For Spanish: Professor Town Peterson

   For German or French: Professor Rudolf Jander

   If the student is not a native English speaker, the student’s committee may determine fluency in reading, writing, and speaking English. Following the committee’s determination, the student’s adviser provides a letter to the EEB graduate education committee indicating that the student is fluent.

Residence Requirement. Graduate Studies requires all doctoral students to complete two terms, which may include one summer session, in full-time resident study at KU. See the EEB Graduate Student Handbook for details (www2.ku.edu/~eeb).

Comprehensive Oral Examination. The comprehensive oral examination tests the breadth of students’ knowledge and explores their ability to synthesize information and think critically. The examination should include, but is not limited to, questions relating to ecology, evolution, and systematics, as well as information about general biology. Examinations are conducted in English. The examination normally is taken within six semesters of entering the Ph.D. program. A majority vote of the committee is required for the student to pass the examination. If the adviser or committee members wish, secret ballots may be used. To award Honors, at least 80 percent of the committee members must judge the student’s performance to be exceptional. An exceptional performance would be one that is judged to be in the top 10 percent of examinations in which the committee members have participated.

If a student fails the comprehensive examination, another examination may be scheduled, but under no circumstances may a student take it more than three times. The examination may not be repeated until at least 90 days after a previous unsuccessful attempt.

The comprehensive oral examination committee must consist of at least five Graduate Faculty members. At least three must be EEB faculty members, and one must be from another KU department representing Graduate Studies. Non-KU faculty may be appointed Ad Hoc members of the Graduate Faculty. The major adviser may participate and vote in the comprehensive oral examination.

All Ph.D. aspirants must prepare a dissertation proposal that follows the NSF Doctoral Dissertation Improvement Grant model. The dissertation proposal must be submitted to all members of the comprehensive oral examination committee for review and approval at least two weeks prior to the examination.

To be eligible to take the comprehensive oral examination, students must meet all FLORS requirements as well as the Graduate Studies residence requirement. Doctoral students who have advanced to candidacy by completing the comprehensive oral examination should note a change in their enrollment requirements (see the EEB Graduate Student Handbook at www2.ku.edu/~eeb).

Research Progress, Final Oral Examination, and Dissertation Defense. After passing the comprehensive oral examination, the student, in consultation with the adviser, selects a dissertation committee. The committee must consist of at least three Graduate Faculty members, typically the adviser and two other faculty members with complementary research interests. Near the completion of the student’s research, the student and adviser select two more members to form the final oral examination committee. All members must belong to the Graduate Faculty, with three from EEB, and one must be from another KU department. Non-KU faculty may be appointed Ad Hoc members of the Graduate Faculty.

All five members should read and comment on the dissertation. Three of the five members are designated readers and provide a more detailed review. The student should provide drafts of the dissertation for review and revision by committee members before scheduling the defense. The dissertation should meet general regulations (www.graade.ku.edu). When the readers have given tentative approval of the dissertation, the final oral examination and dissertation defense may be scheduled. The examination and defense should be scheduled at least three weeks before the defense date. The departmental graduate coordinator should be contacted at this time to prepare paperwork for the defense. At least five months must have elapsed between successful completion of the comprehensive oral examination and the date of the final oral examination.

The final oral examination includes a presentation of the candidate’s dissertation as a formal, public lecture. Whenever possible, the presentation should be part of the regular departmental colloquium series. The presentation is followed by a question period, then the final oral examination committee meets with the student for further discussion of the dissertation.

A majority vote of the committee is required for the student to pass the examination; 80 percent of the committee must agree to award a student Honors. Both the dissertation and the presentation are considered in the decision. After passing the final oral examination, the student should make any corrections required.

A dissertation in English based on the results of original research must be submitted and approved. The general regulations concerning the preparation of the dissertation also must be met. The dissertation must be submitted electronically to Graduate Studies (www.graduiate.ku.edu). The dissertation also must be submitted to the department on CD in either PDF or Word format. Paper copies of the title and acceptance pages containing the signatures of the examining committee members must be submitted to both the College Office of Graduate Affairs and the department.
Biological Sciences: Molecular Biosciences

Acting Chair: Robert Cohen, rcohen@ku.edu
Haworth Hall, 1200 Sunnyside Ave., Room 2034
Lawrence, KS 66045-7566
www.molecularbiosciences.ku.edu, (785) 864-4631

Graduate Director: Stephen H. Benedict, sbene@ku.edu,
7035 Haworth Hall, (785) 864-4007

Graduate Program Coordinator: John P. Connolly,
jconnolly@ku.edu, 2034 Haworth Hall, (785) 864-4311

Professors: Benedict, Brown, Cohen, Dentler, Kelly, Kuczer, Oakley, Orr, Picking, Richter, Steinmetz, Suprenant, Takusagawa, Vacser, Weaver

Professors Emeriti: Borchert, Buller, Burton, Draper, Floor, Himes, Kittos, Sanders, Schowen, Shancel, Wytenbach, Yochim

Associate Faculty: Crawford, Dobrowsky, Faiman, Fischer, Gleason, Hesse, Jensen, E. Michaelis, M. Michaelis, Mure, Scott, Yang

Affiliated Faculty: Ackley, Azuma, Davido, De Guzman, Gamblin, Harsay, Hefty, Im, Karanicolas, Lamb, Macdonald, Neufeld, Tang, Ward, Zhang

The department offers the Doctor of Philosophy and the Master of Arts in biochemistry and biophysics; microbiology; and molecular, cellular, and developmental biology. Programs in neuroscience and genetics also allow a research focus. Graduate students may pursue degree tracks in the disciplines of their choice but may also be involved in collaborative research. New students should confer with the graduate coordinator to plan a first-semester schedule. Until the student chooses a permanent adviser, the graduate coordinator advises him or her.

The department has established a level of enrollment appropriate for normal progress (course work and research effort) toward an advanced degree. These credit-hour requirements may exceed, but not fall below, minimum Graduate Studies requirements. A student must enroll full-time in residence for at least two regular academic-year semesters after the first year of graduate study. Nine credit hours constitute full-time enrollment. If the student holds a half-time research or teaching assistantship, 6 hours constitute full-time enrollment. The department expects graduate students who have not yet passed the comprehensive oral examination (including those with half-time assistantships) to enroll in at least 9 hours each semester and 3 hours each summer session. After passing the comprehensive oral examination, a doctoral candidate must be continuously enrolled, including summer sessions, until all degree requirements are completed. For the first 18 hours of post-comprehensive enrollment, the doctoral candidate must take a minimum of 6 hours per semester and 3 hours per summer session. Only in the terminal semester(s), when the student is writing the dissertation, can enrollment be reduced to a minimum of 1 hour.

Graduate Teaching Assistantships and Graduate Research Assistantships are available. GTAs are appointed on a semester basis. GRAs are appointed on a semester, academic-year, or calendar-year basis. During the first two semesters, a new Ph.D. graduate student follows a rotation schedule through three research laboratories. Master’s students must have at least one laboratory rotation. This program acquaints each student with the research conducted by each faculty member. Students then choose a home lab. This decision must be mutually agreed on with the major professor. Each graduate student must teach for at least two semesters.

Admission

The department adheres to minimum admission requirements. The number of new students accepted each year depends largely on availability of laboratory space, financial resources, grants, and the number of students leaving the program. The department maintains a full enrollment.

The departmental Web site at www.molecularbiosciences.ku.edu has information about application procedures and a link for applying directly online. A completed application file must include (1) an application form and fee; (2) one copy of all academic transcripts (international students must provide one copy in English and one in the native language); (3) a one- to two-page résumé; (4) Graduate Record Examination scores (GRE must have been taken within two years of the initial semester); (5) Internet-Based Test of English as a Foreign Language (iBT) scores for international students; (6) three recommendation letters; and (7) a statement of aims describing the applicant’s interests and professional goals.

All files must be complete and received in the department by December 15 each year. First consideration is given to those who meet this deadline. Applicants are informed of decisions after February 15.

Send all requested application materials to

The University of Kansas
Department of Molecular Biosciences
Haworth Hall, 1200 Sunnyside Ave., Room 2034
Lawrence, KS 66045-7566

M.A. Degree Requirements

General Requirements for All M.A. Students. Refer to each discipline for specific course requirements. General requirements include (1) a minimum of 30 hours of graduate credit; (2) a minimum of one laboratory rotation during the first semester of graduate study; (3) enrollment every semester in BIOL 701 Topics in: Molecular Biosciences Seminar; (4) completion of the following courses: BIOL 807 Graduate Molecular Biosciences, and BIOL 818 Techniques in Molecular Biosciences; (5) a graduate committee established by the beginning of the spring semester of the first year; (6) a minimum of one annual graduate committee meeting until completion of the degree. The following thesis options are available:

1. Write a thesis resulting from original research on a laboratory problem.
2. Publish a research paper in a national, refereed journal. Acceptance of the paper for publication constitutes publication for conferral of the degree.
3. Write a library thesis on a topic approved by the student’s graduate committee.

Specific M.A. Requirements: Biochemistry and Biophysics. BIOL 750 Advanced Biochemistry, BIOL 772 Gene Expression, plus electives to satisfy the 30-hour requirement. Electives are determined in consultation with the graduate adviser and graduate committee.

Specific M.A. Requirements: Microbiology. At least three graduate courses are required, selected from BIOL 811 Advanced Molecular and Cellular Immunology, BIOL 812 Mechanisms of Host-Parasite Relationships, BIOL 813 Advanced Bacterial Physiology, BIOL 814 Advanced Molecular Virology, and BIOL 815 Advanced Molecular Genetics; plus electives to satisfy the 30-hour course requirement. No more than 6 of these hours can be below the 700 level. Electives are determined in consultation with the graduate adviser and graduate committee.

Specific M.A. Requirements: Molecular, Cellular, and Developmental Biology. BIOL 752 Cell Biology, BIOL 755 Mechanisms of Development, and either BIOL 753 Advanced Genetics or BIOL 772 Gene Expression, plus electives to satisfy the 30-hour course require-
ment. Electives are determined in consultation with the graduate adviser and graduate committee.

Ph.D. Degree Requirements

General Requirements for All Ph.D. Students. All general requirements must be fulfilled. Refer to each discipline for specific course requirements. General requirements include (1) at least three individual laboratory rotations during the first two semesters of graduate study; (2) enrollment every semester in BIOL 701 Topics in: Molecular Biosciences Seminar; (3) completion of the following courses: BIOL 807 Graduate Molecular Biosciences, and BIOL 818 Techniques in Molecular Biosciences; (4) a FLORS requirement (satisfied by completion of BIOL 818); (5) a minimum of two semesters of graduate teaching; (6) a graduate committee established before the beginning of the fall semester of the second year; (7) a minimum of one annual graduate committee meeting; (8) a written preliminary examination in the form of a research proposal completed by the end of the spring semester of the second year of graduate study (BIOL 925); (9) a comprehensive oral examination held no later than October 1 of the fall semester of the third year of graduate study (successful completion of the comprehensive oral examination admits the student to candidacy for the Ph.D. degree); (10) a dissertation based on original research presented to the dissertation examination committee for evaluation and presented and defended in a formal public lecture; and (11) completion of the degree in seven years.

First-year Curriculum for All Students. First-year courses include BIOL 701 Topics in: Molecular Biosciences Seminar (enrollment required every semester), BIOL 807 Graduate Molecular Biosciences, BIOL 818 Techniques in Molecular Biosciences, and BIOL 985 Advanced Study laboratory rotations (fall and spring semester).

Specific Ph.D. Requirements: Biochemistry and Biophysics. BIOL 750 Advanced Biochemistry, BIOL 901 Graduate Seminar in Biochemistry and Biophysics (one semester), BIOL 918 Modern Biochemical and Biophysical Methods, and BIOL 952 Introduction to Molecular Modeling. The graduate committee may recommend that additional courses be taken.

Specific Ph.D. Requirements: Microbiology. At least four of the following five graduate courses are required: BIOL 811 Advanced Molecular and Cellular Immunology, BIOL 812 Mechanisms of Host-Parasite Relationships, BIOL 813 Advanced Bacterial Physiology, BIOL 814 Advanced Molecular Virology, BIOL 815 Advanced Molecular Genetics. The graduate committee may recommend that additional courses be taken.

Specific Ph.D. Requirements: Molecular, Cellular, and Developmental Biology. BIOL 752 Cell Biology, BIOL 755 Mechanisms of Development, and either BIOL 753 Advanced Genetics or BIOL 772 Gene Expression. The graduate committee may recommend that additional courses be taken.

Biological Sciences Courses

Biology Courses

BIOL 500 Biology of Insects (3).
BIOL 502 Laboratory in Insect Biology and Diversity (2).
BIOL 503 Immunology (3).
BIOL 504 Immunology Laboratory (2).
BIOL 505 Social Insects (3).
BIOL 506 Pathogenic Microbiology (3).
BIOL 507 Pathogenic Microbiology Laboratory (2).
BIOL 509 Biology of Spiders (3).
BIOL 510 Comparative Anatomy (5).
BIOL 511 Biology of Spiders Laboratory (1).
BIOL 512 General Virology (3).
BIOL 513 Virology Laboratory (2).
BIOL 514 Principles of Ecology, Honors (3).
BIOL 516 Microbial Physiology (3).
BIOL 517 Microbial Physiology Laboratory (2).
BIOL 518 Microbial Genetics (3).
BIOL 519 Microbial Genetics Laboratory (2).
BIOL 525 Aquatic Entomology (5).
BIOL 533 Biology of Fungi (4).
BIOL 536 Cell Structure and Function (Honors) (3).
BIOL 540 General Invertebrate Zoology (4).
BIOL 545 Evolution of Development (3).
BIOL 550 Introduction to Systematics (3).
BIOL 555 General Plant Physiology (3).
BIOL 560 Histology (3).
BIOL 561 Histological Technique (2).
BIOL 570 Introduction to Biostatistics (3).
BIOL 571 Introduction to Biostatistics Laboratory (2).
BIOL 582 Principles of Biogeography (3).
BIOL 583 Herpetology (3).
BIOL 590 Principles of Embryology (3).
BIOL 592 Ichthyology (4).
BIOL 593 Ornithology (3).
BIOL 594 Forest Ecosystems (3).
BIOL 595 Human Genetics (3).
BIOL 599 Senior Seminar: (1).
BIOL 600 Introductory Biochemistry, Lectures (4).
BIOL 602 Plant Ecology (3).
BIOL 603 Systematic Botany (3).
BIOL 606 Ecological Plant Physiology (3).
BIOL 607 Field and Laboratory Exercises in Plant Ecology (2).
BIOL 608 Developmental Plant Anatomy (4).
BIOL 609 Current Progress in Microbiology (1).
BIOL 610 Plant Kingdom (4).
BIOL 611 Molecular Systematics and Evolution (4).
BIOL 612 Fundamentals of Microbiology (3).
BIOL 613 Biology of Honeybees (3).
BIOL 616 Medical Entomology (3).
BIOL 620 Physiological Ecology (3).
BIOL 622 Paleontology (3).
BIOL 623 Paleontology Laboratory (1).
BIOL 625 Behavioral Ecology and Sociobiology (3).
BIOL 630 Conservation and Wildlife Biology (3).
BIOL 631 Biomolecular Modeling and Simulation (3).
BIOL 636 Biochemistry I (3).
BIOL 637 Introductory Biochemistry Laboratory (2).
BIOL 638 Biochemistry II (3).

With more than 8 million plant and animal specimens in its collections and support from the National Science Foundation, KU’s Biodiversity Institute ranks among the top five institutions in the nation.

The Kansas Ecological Reserves offer researchers and educators 3,300 acres of diverse habitats, including tallgrass prairie, oldfield, wetland, forest, successional woods, and land in agricultural management.
The Biodiversity Institute studies the life of the planet for the benefit of the earth and its inhabitants, documenting the fantastic diversity of life on earth, uncovering its intricate patterns, telling the grand stories that emerge, and educating the next generation of biodiversity scientists.
Drugs affecting these processes and current research on receptor isolation and re‐
correlation will be discussed. Prerequisites will differ depending on the viewpoint. (Same as CHEM 775, MDCM 775, NURO 775, P&TX 775, and PHCH 775.) Prerequisite: BIOL 600 or equivalent or consent of instructor. LEC

BIOL 777 Integrative and Developmental Neurobiology (3). Cellular processing of neu-
rons, with an emphasis on the cellular mechanisms underlying nervous system
functioning, and integration of these functions among the various areas to produce
cohort movement and perceptions will be discussed. A description of forces guiding
the development of the nervous system to form a coherent working system in both in-
vertebrate and vertebrate animals will be presented, as will determinants of brain sex-
ual dimorphism. Prerequisite: An upper level course in physiology or BIOL 520. LEC

BIOL 780 Fisheries (2). Philosophy and practice of conservation as it applies to major
world fisheries. Species principally utilized, factors affecting production, methods
for assessment, management of fisheries, and productive uses of the fisheries in
relation to human food supplies and recreational needs. Prerequisite: BIOL 412. LEC

BIOL 781 Fisheries Laboratory (2). Training in field and laboratory techniques for
fishery research and management. Prerequisite: Concurrent or prior enrollment in
BIOL 780. LAB

BIOL 782 Principles of Biogeography (3). A synthesis of historical and ecological
biogeography of plants and animals, treating vicariance, dispersal, and commu-
nity patterns; lectures, readings, discussions. A course in systematics and a course
in ecology are recommended. LEC

BIOL 783 Herpetology (3). A study of amphibians and reptiles. This lecture course
will explore the taxonomic diversity of amphibians and reptiles, and cur-
rent areas of active research in herpetology. Topics will be considered within a
prerequisite framework, and will include herpetological theory, herpetology,
tetrapod origins, skeletal systems, growth, circulatory system, locomotion, thermal
and water regulation, hibernation, ecology, sexual behavior, parental care, and
mimicry. Students taking the course at the 700 level will have additional work re-
quired of them. Prerequisite: BIOL 781. LAB and BIOL 808, general biology course,
and permission of instructor. LEC

BIOL 784 Introduction to Museum Public Education (3). Consideration of the
goals of an institution’s public education services, developing programs, identify-
ing potential audiences, developing audiences, and funding. Workshops and
demonstrations are designed for students to gain practical experience working
with various programs and developing model programs. (Same as AMS 797, GEOL 784, HIST 721, and MUSE 708.) Prerequisite: Museum Studies student, In-
digenous Nations Studies student, or consent of instructor. LEC

BIOL 785 Museum Management (3). Lecture, discussion, and laboratory exercises
on the nature of museums as organizations; accounting, budget cycles, personnel
management, and related topics will be presented using, as appropriate, case
studies and a simulated museum organization model. (Same as AMS 731, GEOL 783, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

BIOL 786 Fundamentals of Tropical Biology (1-8). The tropical environment and biota;
ecologic relations, communities and evolution in the tropics. Primarily a field course,
taken in Costa Rica; two sessions per year, February-March, July-August. FLD

BIOL 787 Introduction to Museum Exhibits (3). This course will consider the role of
exhibits as an integrated part of museum collection management, research, and
publishing. Lecture and discussion will focus on the role of museum exhibits in
producing museum exhibits. Laboratory exercises will provide first hand experience
with basic preparation techniques. Emphasis will be placed on the management of
an exhibit program in both large and small museums in the major disciplines. (Same
as AMS 734, GEOL 782, HIST 720, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

BIOL 788 The Nature of Museums (3). The purpose of this course is to provide an
overview of the kinds of museums, their various missions, and their characteris-
tics and potentials as research, education, and public service institutions responsi-
bile for collections of national and cultural objects. (Same as AMS 720, GEOL 782, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

BIOL 789 Field Course in Entomology (1-6). Field experiences in various habitats,
with an emphasis in ecology, systematics, behavior, and collection techniques. FLD

BIOL 790 Paleontology of Lower Vertebrates (3). General account of the osteol-
ogy, geologic distribution, and evolution of the principal groups of fishes, am-
phibians, reptiles, and birds. Lectures and laboratory. (Same as GEOL 725.) LEC

BIOL 791 Paleontology of Higher Vertebrates (3). Form and function of the verte-
bral column, study of its evolution, and the evolutionary significance of anomalous
anatomical modifications involved in the process as ascertained from the fossil
record. Lectures and laboratory. (Same as GEOL 726.) LEC

BIOL 792 Ichthyology (4). A study of fishes. Lecture topics include the structure
and function of fishes, the adaptive radiation of fishes in the compressive envi-
nment, and a survey of major fish groups with emphasis on evolutionary relationships and
biogeography. Laboratory topics include a survey of fish species using specimens, and
the use of keys to identify fishes with emphasis on the Kansas fish fauna. A research
paper using primary scientific literature is required. Prerequisite: Graduate standing
or permission of the instructor. LEC

BIOL 794 Mammalogy (3). A study of mammals, with emphasis on systematics,
biochemistry, and natural history. Lectures, laboratory, and field study. Prerequi-
tes: BIOL 100, BIOL 413. LEC

BIOL 795 Biology of Amphibians (3). Evolutionary biology of amphibians with empha-
sis on systematics, morphology, development, reproductive strategies, and distribu-
tion; lectures and laboratory. Prerequisite: BIOL 646 or permission of instructor. LEC
BIOL 796 Biology of Reptiles (3). Evolutionary biology of reptiles with emphasis on systematics, morphology, reproductive strategies, and herpetological lectures and laboratory. Prerequisite: BIOL 664 or permission of instructor. LEC

BIOL 797 Field Course in Vertebrate Paleontology (3-6). Training in the techniques of collecting vertebrate fossils, description and interpretation of the stratigraphy of fossiliferous environments, and preparation and sale of fossils. Field and laboratory. FLD

BIOL 798 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, and pest management of museum-supported collections of biological materials. Prerequisite: BIOL 807 and BIOL 808, or a course in microbiology and a second course in molecular biology. LEC

BIOL 799 Natural History Museum Apprenticeship (1-6). Provides directed, practical experience in collection care and management, public education, exhibits, administration with emphasis to suit the particular requirements of each student. Full time for one semester or half time for two semesters. (Same as AMS 730, GEOL 785, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Independent Nations Studies student, or consent of instructor. LEC

BIOL 801 Topics in: (1-3). Advanced courses on special topics in biology, given as need arises. Lectures, discussing readings, laboratory or field work. Students may select sections according to their special interests. LEC

BIOL 802 The Art of Becoming a Professional Scientist (3). Discusses aspects of graduate education that are directed at the post-B.A. phases of a career, but must be initiated early in the graduate student program of study. One 3-hour discussion per week. LEC

BIOL 806 Major Patterns in Insect Evolution (3). Extensive reading and discussion of the most important studies on the evolution of insects, with an emphasis on the evolutionary history of insects, including the fossil history of insects, the monophyly of arthropods, the origin of wings, the changing role of insects in ecological communities, the origins of social behavior, modes and mechanisms of speciation, and patterns of dispersal. Assigned reading: TheEssence of Insects, an introduction to the evolutionary theory and insect biology, especially morphology, development, and classification. Prerequisite: Permission of instructor. LEC

BIOL 807 Graduate Molecular Biologies (6). An introduction to the advanced study of biochemistry, microbiology, genetics, cell and developmental biology, and neurobiology for all Molecular Biosciences graduate students. Topics can include macromolecular structure, metabolism, kinematics and thermodynamics, bioinformatics, prokaryotic and eukaryotic genetic mechanisms, cell structure and function, signal transduction, basic concepts of molecular genetics, microbiology, immunology, microorganisms, neural synaptic transmission, and sensory neurophysiology. Prerequisite: Admission to the graduate program in Molecular Biologies, or consent of instructor. LEC

BIOL 810 Seminar in Biochemistry (1). Presentation and discussion of specific areas of recent research in biochemistry. Course may be taken more than once. LEC

BIOL 811 Advanced Molecular and Cellular Immunology (2). Covers recent advances in immunology and immunobiology. Topics include structure and function of antibodies, the immune system, idiosyncrasies, induction and regulation of the immune response through cell interactions and cytokine action, and the role of immune activation in disease states such as hyperimmunogenicity, autoimmunity, and cancer. Prerequisite: BIOL 807 and BIOL 808, or an introductory course in immunology, or consent of instructor. LEC

BIOL 812 Mechanisms of Host-Parasite Relationships (2). Emphasis is on virus-like factors of microorganisms and the host response to infection. Topics will include pathogenesis of intracellular and extracellular parasites, bacterial endotoxins, and toxins, and the role of innate and acquired immunity in host resistance and the response to infection. Prerequisite: BIOL 807 and BIOL 808, or a course in biochemistry, or consent of instructor. LEC

BIOL 813 Advanced Bacterial Physiology (2). The intermediary reactions catalyzed by the bacterial cell during energy-requiring processes. Thermodynamic consideration of these processes are discussed. Knowledge of calculus is recommended. Prerequisite: BIOL 807 and BIOL 808, or a course in microbiology and a course in biochemistry, or consent of instructor. LEC

BIOL 814 Advanced Molecular Virology (2). The course concentrates on evaluation of current literature concerning all aspects of molecular biology, biochemical char-acterization, and pathogenic mechanisms involved in host-virus interactions. Students will be expected to present articles and participate in discussions. Prerequisi-tes: BIOL 807 and BIOL 808, or a course in microbial genetics and a course in virology, or consent of instructor. LEC

BIOL 815 Advanced Molecular Genetics (2). A literature-based course that covers recent advances in microbial molecular genetics. Topics include transcription, translation, mutagenesis and repair, genetic exchange mechanisms, and regulation of gene expression. Prerequisite: BIOL 807 and BIOL 808, or a course in microbial genetics, or consent of instructor. LEC

BIOL 818 Techniques in Molecular Biologies (2). This course provides an intro-duction to common techniques used for research strategies in molecular bio-chemistry. The course is designed for students in the Department of Molecular Biologies. Prerequisite: Enrollment in the Molecular Biologies Graduate Program or consent of instructor. LAB

BIOL 840 Scientific Communication (2). Principles of English communication skills for the professional scientist. The course explores the form, function, and practice (including ethics) of scientific communication, emphasizing elements of writing and speech that are important to clarity and precision. The course covers written and verbal communication of primary research results as well as composing corre-spondence, a curriculum vitae, reviews, etc. Prerequisite: Graduate standing. LEC

BIOL 841 Biometry I (5). The application of statistical methods to data from vari-ous fields of biological research. Special emphasis is placed on practical computational procedures. Prerequisite: College algebra. LEC

BIOL 842 Biometry II (5). This course is primarily devoted to special advanced topics in analysis of variance, analysis of covariance, regression analysis, analysis of goodness of fit, and point estimation of parameters. Prerequisite: BIOL 841. LEC

BIOL 847 Phylogenetics (3). An introduction to the theory and practice of phylo-genetic analysis. Includes the biology of character evolution, determination of character polarity, testing alternate phylogenetic trees, and reconstructing trees using computer techniques. Also includes principles of constructing phylogenetic classifications and the nature of taxa in the evolutionary process. Prerequisite: BIOL 841 and consent of instructor. LEC

BIOL 848 Phylogenetic Methods (4). A survey of methods for inferring phylo-genetic trees from character data and using phylogenies to address evolutionary questions. Lectures will present the specific methods of phylogenetic analyses, and present methods for handling and publishing phylogenetic methods. Computer lab will familiarize students with software that implements the analyses discussed in lecture. Intended for graduate students specializing in systematics. Prerequisite: BIOL 845 and BIOL 841 or consent of instructor. LEC

BIOL 872 Gene Expression II (3). Second semester of a two-semester lecture course on gene expression. Emphasis on control of gene expression at the transcriptional and post-transcriptional levels. Prerequisite: BIOL 772 or consent of instructor. LEC

BIOL 888 Topics in Evolutionary Morphology: Systems Approach (2). Presentation and discussion of advanced topics in evolutionary morphology with emphasis on the theories and methods of bio-geography. Prerequisite: BIOL 886. LEC

BIOL 890 Advanced Study in Microbiology (1-10). Original investigation by stu-dents at the master’s degree level. Prerequisite: Ten or more hours of microbiology and consent of department. RHS

BIOL 895 Human Genetics (3). A lecture course providing balanced coverage of Mendelian and molecular genetics. Course includes discussions and presentations on current issues in human and medical genetics. Prerequisite: A course in genetics. LEC

BIOL 899 Master’s Thesis (1-10). Research which is to be incorporated into an M.A. thesis. Not more than ten hours may be earned. THE

BIOL 901 Graduate Seminar in Biochemistry and Biophysics (1). Advanced course examining current research topics in biochemistry. Extensive student/faculty interaction is emphasized utilizing lectures, class discussion of assigned readings of research reports, and oral presentations. Prerequisite: Enrollment in graduate school, and departmental permission. SEM

BIOL 903 Graduate Seminar in Neurobiology (1). Advanced course examining current research topics in neurobiology. Extensive student/faculty interaction is emphasized utilizing lectures, class discussion of assigned readings of research reports, and oral presentations. Prerequisite: Enrollment in graduate school, and departmental permission. LEC

BIOL 904 Advanced Seminar in Virology (1). Advanced course examining current research topics in microbiology. Extensive student/faculty interaction is emphasized utilizing lectures, class discussion of assigned readings of research reports, and oral presentations. Prerequisite: Enrollment in graduate school, and departmental permission. SEM

BIOL 905 Advanced molecular Genetics (1-3). A review of current literature in molecular genetics. RHS

BIOL 906 Advanced Genetics (1-3). May be repeated for credit up to six hours. Review of current literature and genetic theory of selected topics such as population, molecular, quantitative, and physiological genetics. RHS

BIOL 911 Research Topics in Plant Physiology and Biochemistry (1-6). Directed research on selected topics. Prerequisite: BIOL 770 or equivalent. RHS

BIOL 918 Modern Biochemical and Biophysical Methods (4). This course empha-sizes the use of techniques for solving biological problems through the use of bio- logical macromolecules. Students will complete several modules that consist of lectures relating to theoretical and practical aspects of each methodological approach, and apply these techniques to solving a specific problem. Students will submit a paper describing their inclusion. Prerequisite: BIOL 807, BIOL 808, and BIOL 818, or permission of instructor. LEC

BIOL 925 Research Grant Proposal Preparation (3). Formats, strategies, and styles of research grant proposal writing. Prerequisite: Completion of three semesters of the graduate level courses in molecular sciences or genetics program graduate curriculum, or consent of instructor. LEC

BIOL 930 Ultrastructure and Cellular Mechanisms (3). Two lectures and one seminar-recitation. A detailed consideration of electron microscopic analyses of cell structures and reconstitutions as related to cell function and subcellular organization. Prerequisite: BIOL 842 or knowledge of elementary matrix algebra. LEC

BIOL 943 Multivariate Data Analysis (3). Matrix formulation of multivariate models and data. Specific methods covered include Principal Components Analysis, Factor Analysis, Multiple Group Discriminant Analysis and Canonical Analysis, and Canonical Correla-tion Analysis. Prerequisite: BIOL 842 or knowledge of elementary matrix algebra. LEC

THE UNIVERSITY OF KANSAS 2009-2011

Biological Sciences Courses

180
BIOL 944 Topics in Quantitative Ecology: (1-3). Presentation and discussion by instructor and students of mathematical and statistical concepts in ecology. Topics are selected from texts or sets of readings. LEC

BIOL 950 Evolutionary Mechanisms (3). Reading and discussions of evolutionary mechanisms from the genetic, ecologic, and systematic viewpoints. Prerequisite: BIOL 412. LEC

BIOL 952 Introduction to Molecular Modeling (3). Introduction to theory and practice of contemporary molecular modeling, including molecular mechanics, molecular dynamics, computer graphics, data analysis, use of structure and sequence databases, docking, and homology modeling. Weekly computer laboratory section aimed at allowing participants to pursue independent research projects that incorporate modeling aspects. Lectures, laboratory manuals, program descriptions, and technical notes are presented on course Web page. (Same as MDCM 952.) Prerequisite: Graduate standing or consent of instructor. LEC

BIOL 968 Seminar in Vegetation Geography (2-3). (Same as GEOG 937.) LEC

BIOL 985 Advanced Study (1-10). Individual investigations; laboratory, field or museum; or reading assignments in specialized topics not ordinarily treated in other courses. RSHEL

BIOL 999 Doctoral Dissertation (1-12). Original research that is to be incorporated into a Ph.D. dissertation. THE

Environmental Studies Courses


EVRN 528 Environmental Justice and Public Policy (3).

EVRN 542 Ethnobotany (3).

EVRN 550 Environmental Economics (3).

EVRN 553 Comparative Environmental Politics (3).

EVRN 561 United States Environmental History in the 20th Century (3).

EVRN 563 U.S. Environmental Thought in the 20th Century (3).

EVRN 611 Water Quality, Land Use, and Watershed Ecosystems (3).

EVRN 615 Capstone Project (3).

EVRN 620 Environmental Politics and Policy (3).

EVRN 624 Independent Study (1-9).

EVRN 625 Honors Research in Environmental Studies (3).

EVRN 656 Ecosystem Ecology (3).

EVRN 701 Climate Change, Ecological Change, and Social Change (3). This interdisciplinary graduate seminar examines the history of climate change from natural and physical science, social science, and humanities perspectives. The class explores the ways that different disciplines approach understanding climate change and its impact on natural and human systems and how these understandings have changed over time. The course is team-taught by faculty from the natural and physical sciences, social sciences, humanities, and professional schools, and will include faculty guest speakers from KU and off-campus. Students will write a research paper on a climate change topic of their choice that reflects the historical and interdisciplinary approaches of the seminar. A goal of the seminar is to assemble student papers for presentation and possible publication. Prerequisite: Consent of instructor. LEC

EVRN 702 Energy, Ecology, and Community in Kansas (3). This interdisciplinary graduate seminar examines the role of climate in shaping energy, ecology, and community in Kansas from natural and physical science, social science, and humanities perspectives. The class will combine lectures, group projects, and field research to understand the ways that climate change and energy production are reshaping the human and natural systems in Kansas and the Great Plains. The course is team-taught by faculty from the natural and physical science, social science, humanities and professional schools, and will include faculty guest speakers from KU and off-campus. Students will identify and design a service learning project that combines issues of climate, energy, and community, and will use a variety of interdisciplinary tools including modeling, remote sensing, and scaling to complete their project and present their findings to local stakeholders. Prerequisite: Consent of instructor. LEC

EVRN 720 Topics in Environmental Studies: 1 (3). Courses on special topics in Environmental Studies. These courses may be lecture, seminars, or readings. Students may enroll in more than one interest group but may enroll in a given interest group only once. LEC

Bosnian/Croatian/Serbian

See Slavic Languages and Literatures.

Botany

See Biological Sciences: Ecology and Evolutionary Biology.

Chemistry

Chair: Joseph A. Heppert, jheppert@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 2010
Lawrence, KS 66045-7572, www.chem.ku.edu, (785) 864-4673

Associate Chair, Graduate Programs: Brian B. Laird, blaird@ku.edu, 6084 Malott Hall, (785) 864-4632

Professors: Bowman-James, Busch, Carlson, Chu, Dunn, Givens, Hanson, Heppert, Hierl, C. Johnson, Kuczer, Laird, C. Lunte, S. Lunte, Rivera, Wilson

Professors Emeriti: Burgstahler, Everett, Harmony, Huysen, Iwamoto, Kuwana, Landgrebe, K.B. Schowen, R. Schowen

Associate Professors: Barybin, Benson, Berrie, Desaire, Malinakova, Thompson, Tung

Assistant Professors: Jackson, M. Johnson, Mure, Rubin, Weis

The department’s graduate program, its Ph.D. program in particular, produces graduates with the basic knowledge, skills, and experimental training necessary to enter productive careers in academic, industrial, and government positions. Faculty and graduate students work collegially, not only in the search for new knowledge at the frontiers of chemistry, but also toward the solution of problems of fundamental societal concern. Although the department believes it is essential to provide graduate students with a knowledge base spanning the traditional areas of analytical, inorganic, organic, and physical chemistry, it nurtures its particular strengths in several important research areas at the interface of chemistry and the biological/medical sciences. The Department of Chemistry at KU is a worldwide leader in graduate training and research in bioanalytical chemistry, and its additional interactions with the pharmaceutical and biological sciences have led to strong graduate research programs in diverse areas such as bio-inorganic, bio-organic, and biophysical chemistry. The department also recognizes its central science role by maintaining strong research and Ph.D. programs in areas that interface closely with molecular biosciences, physics, chemical engineering, mathematics, and computer science, for example, in drug discovery, theoretical chemistry, materials, molecular modeling, and laser spectroscopy. The entering Ph.D. student can be assured of finding vigorous programs spanning a full range of chemical studies, and the graduating Ph.D. student can be equally confident that his or her training and skills are marketable commodities.

The department’s M.S. program is a traditional companion to the Ph.D. program and shares the same goals. It is encouraged for students who prefer a program with less depth and a research (thesis) project that is manageable in two to four semesters. Although most entering graduate students choose the Ph.D.—the most desirable degree for those who wish to work as independent scientists in academic, industrial, or institutional settings—the M.S. serves a useful and essential role for students with other ambitions.

Research support facilities include the Biochemical Research Service Laboratory, Instrumentation Design Laboratory, Mass Spectrometry Laboratory, Molecular Graphics and Modeling Laboratory, Nuclear Magnetic Resonance Laboratory, X-ray Crystallography Laboratory, and Glassblowing Shop. Anschutz Library contains more than 300,000 books and periodicals spanning the fields of chemistry, biochemistry, physics, geology, and pharmacy.

Admission

Prerequisites. Before beginning graduate work, students should have completed a bachelor’s degree in chemistry or a related field.

Application. To apply for admission, students must submit a completed graduate application, one transcript, Graduate Record Examination scores (strongly encouraged), and three recommendations from individuals familiar with the applicant’s academic background and abilities. International applicants must supply scores from the Test of English as a Foreign Lan-
guage. It is strongly recommended that international applicants submit scores from the Internet-based TOEFL-IBT rather than the paper-based TOEFL-PBT. Applications should be received by April 15 to be considered for fall semester.

To apply, complete the appropriate chemistry department online inquiry form at www.chem.ku.edu/graduate. From there, you will be directed to the online graduate application form at www.graduate.ku.edu. Send all other requested application materials to:

The University of Kansas
Department of Chemistry
Malott Hall, 1251 Wescoe Hall Dr., Room 2010
Lawrence, KS 66045-7572

Procedure. A committee of departmental faculty members reviews application materials. Admission as a regular graduate student is based on an expectation that the applicant (1) will complete the courses listed in the Prerequisites section before enrollment in the graduate program, (2) will attain a grade-point average of B or higher in chemistry and all other natural science and mathematics courses, and (3) will fulfill general admission requirements. There must also be a favorable evaluation of the other application materials.

M.S. Degree Requirements

The master’s degree requires a minimum of 30 credit hours. Each student must take a distribution requirement of at least one graduate course in three of the five major disciplines (analytical, biochemistry, inorganic, organic, and physical) by the end of the first year.

The candidate for the master’s degree must complete a thesis that does not exceed one-third of the credit hours and demands the solution of some research problem in chemistry. The remaining work may consist of additional specialized courses in chemistry or in related fields such as physics, mathematics, microbiology, biochemistry, or chemical engineering. Students completing a master’s thesis in chemical education must take PRE 715 Understanding Research in Education and PRE 710 Introduction to Statistical Analysis. Courses from outside the department cannot be from more than two departments.

At the time of the completion of the thesis, a candidate for the master’s degree must pass an oral thesis defense (examination) administered by a committee of three members of the department’s Graduate Faculty.

A reading knowledge of a foreign language or a research skill in computer science or electronics techniques is recommended but not required.

Ph.D. Degree Requirements

In addition to completing the same first-year distribution requirement as for the master’s degree, the Ph.D. aspirant must complete all the advanced courses required in the specialization, which are analytical, inorganic, organic, physical, bioanalytical chemistry, or chemical education. The aspirant also must fulfill the following requirements:

1. Each student in the Ph.D. program is expected to complete at least one special requirement such as a foreign language or electronic, computer, or library bibliographic skill.

2. Before taking the oral comprehensive examination for the Ph.D., each student must accumulate a total of 8 points on cumulative examinations within two years after entering graduate studies (four semesters, not including summers). A grade of Pass is worth 2 points and a Fail is worth 0 points. During the first year only, two borderline or marginal performances may receive 1 point each. Six points must be in the student’s major area; except for students in chemical education, who need 4 points in chemical education and 4 points in the chosen traditional research area. Students who do not accumulate 8 points within two years are not allowed to continue in the Ph.D. program.

3. A comprehensive oral examination must be completed. The student must prepare a written, original research proposal before the examination is scheduled. The proposal must be presented and defended orally at the examination; however, the examination is comprehensive in nature. The student must be prepared for questions on a range of topics in the discipline. It should be noted that requirements (1) and (2) must be completed before the comprehensive oral examination can be taken. Failure to pass the oral examination before the beginning of the fourth year of graduate study leads to ineligibility for support by departmental or research funds.

4. A dissertation based on original work of high quality in one of the principal fields of chemistry must be completed.

5. A final oral examination and defense of the dissertation must be completed.

For further details, see the general requirements for the Ph.D. degree in the General Information chapter of this catalog.

Chemistry Courses
CHEM 516 Analytical Chemistry (3).
CHEM 517 Analytical Chemistry Laboratory (2).
CHEM 598 Research Methods (3).
CHEM 622 Fundamentals of Organic Chemistry (3).
CHEM 624 Organic Chemistry I (3).
CHEM 625 Organic Chemistry I Laboratory (2).
CHEM 626 Organic Chemistry II (3).
CHEM 627 Organic Chemistry II Laboratory (2).
CHEM 628 Organic Chemistry I, Honors (3).
CHEM 630 Organic Chemistry II, Honors (3).
CHEM 631 Biomolecular Modeling and Simulation (3).
CHEM 635 Instrumental Methods of Analysis (2).
CHEM 636 Instrumental Methods of Analysis Laboratory (2).
CHEM 640 Biological Physical Chemistry (3).
CHEM 641 Biological Physical Chemistry Laboratory (2).
CHEM 646 Physical Chemistry I (3).
CHEM 647 Physical Chemistry I Laboratory (2).
CHEM 648 Physical Chemistry II (4).
CHEM 649 Physical Chemistry II Laboratory (2).
CHEM 667 Systematic Inorganic Chemistry (3).
CHEM 668 Advanced Inorganic Laboratory (2).
CHEM 680 Topics in Chemistry: _____ (1-5).
CHEM 690 Environmental Chemistry (3).
CHEM 696 Junior/Senior Seminar (1).
CHEM 698 Undergraduate Research Problems (1-6).
CHEM 699 Undergraduate Honors Research (2-6).
CHEM 711 Applied Electronics for Scientists (4). Lecture and laboratory course for chemists and other scientists or engineers with little or no background in electronics who need a working knowledge of electronic devices, circuits, and instru-

The Higuchi Biosciences Center includes the Center for Biomedical Research, dedicated to basic research, and the Centers for BioAnalytical Research, Drug Delivery Research, and Neurobiology and Immunology Research, oriented to needs of the pharmaceutical industry.

KU’s Department of Chemistry is a worldwide leader in graduate training and research in bioanalytical chemistry.
CHEM 716 Practicum in Facilitating Learning in the Laboratory (1). The course provides discussions of the diverse group of undergraduates, the laboratory curriculum, teaching strategies to facilitate learning through interaction among students and between student and TA will be discussed. The course includes reading assignments, peer review, and instructor feedback of teaching performance of TAs. Students participate in class discussion once per week. Prerequisite: CHEM 716 or the equivalent, one year of physics; limited enrollment, see instructor. LEC

CHEM 718 Mathematical Methods in Physical Sciences (3). Review of all complex variable theory; introduction to the partial differential equations of physics; Fourier analysis; and special functions of mathematical physics. (Same as PHYS 718.) Prerequisite: Two semesters of junior-senior mathematics, including vector calculus, linear algebra, matrix theory, probability, Fourier analysis; and special functions of mathematical physics. LEC

CHEM 720 Bibliography of Chemistry (1). A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of chemistry. Prerequisite: Consent of department. LEC

CHEM 732 Fundamentals and Methods of Analytical Chemistry (3). An introductory graduate level course in analytical chemistry, in which the principles of electrochemistry, spectrophotometry, and separation science are utilized to solve analytical problems in inorganic, organic, and biochemical analysis. Prerequisite: Undergraduate course in analytical chemistry, a year of organic chemistry, and a year of physical chemistry. LEC

CHEM 737 Coordination and Organometallic Chemistry (3). An examination of the basic foundations of coordination chemistry and organometallic chemistry including symmetry concepts, bonding, magnetism, and reaction mechanisms. Prerequisite: Undergraduate and graduate organic chemistry and physical chemistry. LEC

CHEM 742 Physical Organic Chemistry (1). An examination of the methods used to probe the mechanisms of organic reactions and of the chemistry of some important reactive intermediates. Topics will include isotope effects, kinetics, linear free energy relationships, solvent effects, a continuing discussion of orbital symmetry, rearrangements, carbocations, carbanions, carbones, radicals, excited states, and strained molecules. Prerequisite: CHEM 740. LEC

CHEM 750 Quantum Chemistry and Spectroscopy (3). An introductory study of the application of quantum mechanics to atomic and molecular systems. Includes an introduction to the basic principles of quantum theory, description of electronic structure of atoms and molecules, and the foundations of spectroscopy. Contains a brief presentation of group theory and its applications to the analysis of molecular symmetry, spectra and structure. Prerequisite: Two semesters of physical chemistry. LEC

CHEM 752 Statistical Thermodynamics (3). Thermodynamics and introduction to equilibrium and nonequilibrium organic reactions with emphasis on problems of chemical interest. The course consists of two roughly equal parts: 1) An advanced overview of the laws and concepts of thermodynamics with application to specific problems in phase and chemical equilibrium and 2) An introduction to statistical mechanics for both classical and quantum systems. Prerequisite: CHEM 750 or permission of instructor. LEC

CHEM 754 Chemical Kinetics and Dynamics (3). Chemical kinetics and introduction to chemical reaction dynamics. The course consists of two parts: 1) An advanced overview of chemical kinetics including reaction mechanisms and rate laws with applications to unimolecular and bimolecular reactions, catalysts, and energy transfer, and 2) An introduction to reaction rate theory including transition state theory. Marcus electron transfer theory, and collision theory. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 763 Organic Synthesis I (3). A discussion of fundamental reactions for the formation of carbon-carbon bonds, oxidation, reduction, and functional group interchange. Prerequisite: CHEM 740. LEC

CHEM 766 Spectroscopic Identification of Organic Compounds (3). The use of techniques such as infrared, nuclear magnetic resonance, and ultraviolet spectroscopy, and mass spectrometry in elucidating the structure of organic molecules: Laboratory and workshop course. Prerequisite: CHEM 626 and CHEM 627, or CHEM 707. LEC

CHEM 767 Advanced Laboratory Techniques for the Preparation and Purification of Compounds (3). A laboratory course that includes many of the important procedures and techniques of organic and inorganic synthesis. Prerequisite: CHEM 627. LEC

CHEM 775 Chemistry of the Nervous System (5). A study of the overall concept of central nervous system functioning. A brief introduction to neuroanatomy and neurophysiological techniques as well as a relatively detailed discussion of the chemistry of neurotransmitters. (Same as BIOL 775, in which the principles of quantum chemistry, including subset problems of quantum mechanics, the Schrodinger equation, angular momentum, approximation methods, and atomic and molecular systems. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 781 Molecular Spectroscopy (3). Quantitative molecular spectroscopy and its applications. The basic principles of the molecular energy levels, selection rules and spectral transition intensities, and spectral interpretation will be discussed and applied to nuclear and electron magnetic resonance, rotational, vibrational, radiation-rotation, Raman, electron and Mossbauer spectroscopy. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 791 Advanced Statistical Mechanics (3). Advanced equilibrium statistical mechanics and introduction to nonequilibrium statistical mechanics. Topics include: the theory of liquids, critical phenomena linear response theory and time correlation functions, Langevin dynamics, and molecular hydrodynamics. (Same as PHYS 971.) Prerequisite: CHEM 909 or equivalent. LEC

CHEM 901 Chemical Kinetics (2-4). A laboratory course covering a variety of advanced preparative techniques used in inorganic chemistry. Prerequisite: CHEM 737 or equivalent. LEC

CHEM 904 Analytical Separations (3). An advanced analysis of analytical separations. The theory of separation science will be augmented with discussion of practical aspects of instrumentation and experiment design. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 906 Advanced Topics in Inorganic Chemistry (2-3). A course covering various special topics in inorganic chemistry. An announcement of course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 907 Advanced Inorganic Chemistry Colloquium (1). Review of important aspects of inorganic chemistry not covered in regular courses. Open to advanced graduate students. LEC

CHEM 908 Spectrochemical Methods of Analysis (3). Lecture and laboratory course; general concepts of encoding chemical information as electromagnetic radiation; major instrumental systems for decoding, interpretation, and presentation of recorded signals; atomic absorption spectrometry; ultraviolet, visible, infrared, and microwave absorption; molecular luminescence; scanning methods; mass spectrometry; magnetic resonance; automated spectrometric systems. Prerequisite: CHEM 731 and CHEM 750. LEC

CHEM 910 Advanced Physical Chemistry Colloquium (1). Colloquia on various topics of current interest are presented by students, faculty, and visiting scientists. Open to advanced graduate students. LEC

CHEM 911 Advanced Organic Chemistry Colloquium (1). Credit on presentation of a colloquium. Open to advanced graduate students. LEC

CHEM 912 Advanced Chemical Colloquium (1). The individual student studies certain advanced phases of chemistry not offered in the regular graduate courses. Open to advanced graduate students. RSH

CHEM 913 Chemical Kinetics (2-3). A study of the rates of chemical reactions in terms of the classical collision theory, transition-state theory and introductory scattering theory. Topics from the mechanism of gas and liquid phase reactions, fast reactions in solutions, molecular and ionic beam reactions, photochemistry, and other areas of current interest will be discussed. Prerequisite: CHEM 752 or its equivalent. LEC

CHEM 914 Computational Methods in Physical Sciences (3). Advanced computer applications in physical science. Course discusses and illustrates problem organization and solution by numerical and other methods with examples from physics, astronomy, and other physical sciences. Students will design, write, validate, and document computer programs to solve specified problems. Prerequisite: CHEM 750 or permission of instructor. LEC

CHEM 915 Intermediate Quantum Mechanics (3). The mathematical and physical principles of quantum chemistry, including vector spaces, operators and operator algebra, eigenvalue problems, postulates of quantum mechanics, the Schrodinger equation, angular momentum, approximation methods, and atomic and molecular systems. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 916 Molecular Spectroscopy (3). Quantitative molecular spectroscopy and its chemical applications. The basic principles of the molecular energy levels, selection rules and spectral transition intensities, and spectral interpretation will be discussed and applied to nuclear and electron magnetic resonance, rotational, vibrational, radiation-rotation, Raman, electron and Mossbauer spectroscopy. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 917 Advanced Statistical Mechanics (3). Advanced equilibrium statistical mechanics and introduction to nonequilibrium statistical mechanics. Topics include: the theory of liquids, critical phenomena linear response theory and time correlation functions, Langevin dynamics, and molecular hydrodynamics. (Same as PHYS 971.) Prerequisite: CHEM 909 or equivalent. LEC

CHEM 918 Advanced Quantum Mechanics (3). An advanced discussion of the principles and methods of quantum mechanics and recent development of quantum chemistry including subset problems of quantum mechanics, the Schrodinger equation, angular momentum, approximation methods, and atomic and molecular systems. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 919 Advanced Topics in Physical Chemistry (3). A discussion of special topics such as group theory, chemical bonding theory, microwave spectroscopy, electron paramagnetic resonance, mass spectrometry, X-ray crystallography, nuclear chemistry, radiation chemistry, high temperature chemistry, biophysical chemistry, irreversible thermodynamics, transport phenomena, scattering theory, etc. One or more topics will be covered in a given semester and an announcement of the course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC
CHEM 920 Mass Spectrometry (3). An introduction to mass spectrometry. The various ionization techniques and mass analyzers will be discussed, and many examples of different mass spectrometric applications will be introduced. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 925 Bioanalysis (3). A course covering important aspects in modern chemical mass spectrometry. An emphasis is placed on bioanalysis. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 949 Advanced Topics in Analytical Chemistry (3). A course covering special advanced topics in analytical chemistry not included in other graduate courses. An announcement of course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 963 Organic Synthesis II (3). A survey of important techniques in organic chemistry with respect to scope, limitations, mechanism, and stereochemistry. Emphasis will be placed on new synthetic methods and application of such methods to the synthesis of structurally interesting compounds, particularly natural products. Prerequisite: Forty hours of chemistry including appropriate prerequisites. LEC

CHEM 966 Physical Organic Chemistry II (3). A detailed consideration of the mechanistic features of some important classes of organic reactions. Discussions will include an examination of molecular orbital theory, linear free energy relationships, and acid-base catalysis. Prerequisite: CHEM 742 and one semester of physical chemistry. LEC

CHEM 971 Advanced Topics in Organic Chemistry (3). A discussion of special topics such as free radical chemistry, heterocyclic compounds, isotope effects, molecular orbital theory, natural products, photochemistry, polymer chemistry, reactive intermediates, solution kinetics, linear free energy relationships, and spectroscopic methods. One or more topics will be covered in a given semester and an announcement of the course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 980 Advanced Topics in Chemical Education (2-3). A course covering special advanced topics in chemical education included in other graduate courses. An announcement of course content and prerequisites will be made at the end of the previous semester. This course may be repeated when topic varies. LEC

CHEM 981 Research (1-10). Original investigation on the graduate level. Prerequisite: Forty hours of chemistry including appropriate preparation in the field of specialization. RSH

CHEM 982 Inorganic Structure and Mechanisms (3). The use of quantum theory and group theory in interpreting bonding and physical and chemical properties in inorganic compounds. Mechanistic aspects of transition metal chemistry including substitution reactions, electron transfer reactions, rearrangement reactions, ligand reactions and inorganic photochemistry. Prerequisite: CHEM 737. LEC

CHEM 984 Physical Methods (3). A survey of modern spectroscopic and non-spectroscopic physical methods in chemistry with emphasis on methods applicable to inorganic compounds. For each method, a brief introduction to underlying theoretical principles will be given and examples of applications from the literature will be discussed in detail. Prerequisite: CHEM 982. LEC

CHEM 986 Bioinorganic and Catalytic Chemistry (3). A survey of metalloproteins and metal enzymes and their structures and functions, including recent advances in biomimetic modeling. Principles and applications of heterogeneous and homogeneous catalytic processes emphasizing catalysis at transition metal centers. LEC

CHEM 991 Postdoctoral Research in Chemistry (1-3). Advanced level research in collaboration with a faculty member involving projects in chemistry or related areas. Prerequisite: Doctoral degree or equivalent in an appropriate related area and consent of instructor. RSH

CHEM 996 College Teaching Experience in Chemistry (3). A student will engage in a semester-long planned instructional activity that shall include college classroom teaching under supervision. The planning will be done with the adviser and/or member of the faculty who will supervise the experience. The activity will be done under the supervision of a chemistry department faculty member or by an individual or individuals designated by the candidate’s committee. Prerequisite: 1) CHEM 716, 2) two semesters as a graduate teaching assistant or doctoral candidate status, and 3) CHEM 980 or permission of coordinator. LEC

CHEM 999 Doctoral Dissertation (1-10). Research work (either experimental or theoretical) in chemistry for students working toward the Ph.D. degree. THE

The Wilcox Classical Museum in Lippincott Hall houses original red-figure vases, Greek and Roman coins, inscriptions, and full-sized plaster casts of the Apollo Belvedere, the Parthenon frieze, and other antiquities.

A directory of courses appears on pages 7-8.
the Graduate Record Examination (verbal, quantitative, analytical). Applicants should have earned bachelor’s degrees that include course work in linguistics, psychology, speech pathology, and statistics with minimum grade-point averages of B. Preference is given to those with master’s degrees in linguistics, psychology, education, special education, or speech and hearing sciences or to applicants with relevant post-baccalaureate work experience. No one is admitted for a terminal M.A. degree. Admission materials are reviewed by a subcommittee of the advisory council. The admissions committee supervises the admission process and recommends applicants to the advisory council.

Submit your application online at www.gradle.ku.edu. Send all other requested application materials to

The University of Kansas
Child Language Program, Dole Human Development Center
1000 Sunnyside Ave., Room 3031
Lawrence, KS 66045-7561

Ph.D. Degree Requirements

For the Ph.D. degree, the student must complete all general requirements. These include residence, research skills, comprehensive oral examination, preparation of a dissertation, and the final oral examination and defense of the dissertation. Three options for fulfilling the research skills requirement are available. (1) Competence in the use of computers can be demonstrated by course work or by a successful demonstration of proficiency. Competence in both programming skills and computer applications is required. (2) Proficiency in a language other than English or reading knowledge of two languages other than English can be demonstrated. (3) A record of professional research experience or publication may be used to demonstrate research skills.

For students entering without the master’s degree, the requirements for the M.A. are at least 8 credit hours of core courses in language acquisition; 9 hours of supplemental courses in linguistics, psycholinguistics, developmental psychology, or language intervention; 6 hours of statistics; and 6 hours of thesis. Continuous enrollment in the child language proseminar is required. Within three years of entering the program, students normally complete the required 30 graduate credit hours, prepare an M.A. thesis, and pass a final general examination and defense of the thesis.

Ph.D. post-master’s requirements include a minimum of 36 additional graduate credit hours. These should include at least 8 hours of additional core courses, 15 hours of additional supplemental courses, 9 hours of additional statistical and methodological courses, and a minimum of 6 hours of dissertation.

Continuous enrollment in the proseminar is required.

After completing the research skills requirement and the major portion of the course work, the doctoral student must pass a written preliminary examination and a comprehensive oral examination. The written examination covers four areas: (1) language acquisition, (2) psycholinguistics, (3) developmental psychology, (4) disordered language development or language intervention. The comprehensive oral examination covers the major field, taking one of five forms: (1) a defense of the written preliminary examinations, (2) a defense of a completed research project, (3) a prospectus for a future research project, (4) a discussion of a major review paper, or (5) a review of a research grant proposal and a simulated site visit defense of the proposal.

All students are expected to be engaged continuously in research on child language. Research involvement is documented with appropriate enrollment in research, thesis, and dissertation credit hours, and in the proseminar in child language.

Courses

See course listings for the cooperating departments.

Chinese

See East Asian Languages and Cultures.

Classics

Chair: Pamela Gordon
Wescoe Hall, 1445 Jayhawk Blvd., Room 1021
Lawrence, KS 66045-7594, www2.ku.edu/~classics, (785) 864-2396
Graduate Adviser: Anthony Corbeill, 1035 Wescoe Hall, (785) 864-2393

Professors: Corbeill, Lombardo, Younger
Professor Emeritus: Phillips
Associate Professors: Gordon, Shaw, Welch
Associate Professors Emeriti: Banks, Rosen
Assistant Professors: Scioli, Stinson

The Department of Classics offers advanced course work in the ancient civilizations of Greece and Rome. Students are expected to study the classical languages (Greek and Latin) and literatures as well as the art and archaeological remains of the Greek and Roman worlds.

Admission

The B.A. in classics or another field in the humanities is required. For admission to the graduate program, the entering student should have 15 junior/senior hours in Latin and/or Greek. Financial support is available in the form of teaching assistantships in Latin, Greek, or mythology. Well-qualified candidates with fewer hours in ancient languages are considered for admission and may be offered positions as graduate teaching assistants in nonlanguage courses. The Graduate Record Examination is not required.

Submit your application online at www2.ku.edu/~classics.

Send all other requested application materials to

The University of Kansas
Department of Classics, Graduate Adviser
Wescoe Hall, 1445 Jayhawk Blvd., Room 1035
Lawrence, KS 66045-7594

M.A. Degree Requirements

Course Requirements

1. The degree program consists of 30 hours, whether one chooses the thesis or nonthesis option.

2. The student may stress either Latin or Greek or a combination of both. Students who take only one of the ancient languages at the graduate level must present at least 10 hours of elementary course work in the other; this requirement may also be satisfied by passing a departmental examination.

3. Students may select their 30 hours from graduate courses in Greek, Latin, classics, and certain courses in philosophy, history, history of art, and linguistics. A maximum of 12 hours may be taken in nonlanguage courses.

4. Students who elect to write an M.A. thesis must complete at least 24 hours on the graduate level, in addition to 6 hours of Thesis (LAT 899 or GRK 899). In consultation with the graduate adviser, each student selects a thesis committee of three members.

5. The student selecting the nonthesis option must complete 30 hours of courses on the graduate level. In two of these courses, students must prepare research papers that meet the approval of the appropriate instructors and the graduate adviser. These papers are placed on file in the department office.

Language Requirements. Incoming graduate students take a diagnostic reading examination in Greek or Latin or both if they plan to take graduate-level courses in both languages. Students who take only one of the ancient languages at the graduate level must demonstrate a basic knowledge of the other. By the end of graduate study, the student must also demonstrate a
reading knowledge of German, Italian, or French by using the established university procedures for determining graduate language proficiency (as defined under Doctoral Degree Requirements, Research Skills in the General Information chapter).

**Examinations.** A written general examination is required of all M.A. students. For further information, see the departmental handbook.

### Classics Courses

- **CLSX 501 The History of the Latin Language** (3).
- **CLSX 502 Development of Ancient Greece, ca. 1000-300 B.C.** (3).
- **CLSX 525 Aegean Archaeology and Art** (3).
- **CLSX 526 Greek Archaeology and Art** (3).
- **CLSX 527 Roman Archaeology and Art** (3).
- **CLSX 528 Archaeology and Art of Greece and Rome** (3).
- **CLSX 529 Archaeology and Art of the Ancient Near East** (3).
- **CLSX 570 Study Abroad Topics in Greek and Roman Culture:** (3). A continuation of CLSX 717. Attendance at CLSX 384 required, plus one seminar per week. No knowledge of Greek is required. RSH
- **CLSX 576 Topics in Greek and Roman Literature:** (3).
- **CLSX 577 Topics in the Archaeology and Art of the Ancient Mediterranean:** (1).
- **CLSX 675 Studies in:** (1-3).
- **CLSX 717 Investigations in Greek Drama I** (3). Attendance at CLSX 384 required, plus one seminar per week, discussing the scholarly background of the major lecture, as well as the problems and aims of teaching Greek drama in English to undergraduates. No knowledge of Greek is required. RSH
- **CLSX 718 Investigations in Greek Drama II** (3). A continuation of CLSX 717. Attendance at CLSX 388 plus one seminar per week. No knowledge of Greek is required. RSH
- **CLSX 790 Practicum in the Teaching of Classics** (0.5). Required of all assistant instructors and teaching assistants in the teaching of Classics courses. May be repeated up to three semester hours credit in total. FLD

### Greek Courses

- **GRK 508 Early Greek Philosophy** (3).
- **GRK 701 Archaic Poetry** (3). Close reading of texts from Homer, Hesiod, Pindar, the lyric poets. LEC
- **GRK 702 Drama** (3). Close reading of texts from Aeschylus, Sophocles, Euripides, Aristophanes. LEC
- **GRK 703 History and Oratory** (3). Close reading of texts from Herodotus, Thucydides, Xenophon, Attic orators. LEC
- **GRK 704 Philosophy** (3). Close reading of texts from Plato, Aristotle, the Pre-Socratics. LEC
- **GRK 705 Readings in Classical Greek** (3). Extensive reading in a variety of Greek authors. LEC
- **GRK 790 Practicum in the Teaching of Greek** (0.5). Required of all assistant instructors and teaching assistants in the teaching of Greek. May be repeated up to three semester hours credit in total. FLD
- **GRK 798 Studies in:** (1-3). Selected readings for qualified students who desire special work on a flexible basis. May be repeated for credit, the maximum being twelve hours. Prerequisite: Undergraduate proficiency in Greek or equivalent. RSH
- **GRK 899 Thesis** (1-4). THE

### Latin Courses

- **LAT 700 Advanced Latin Prose Composition** (3). An examination of the grammar, syntax, and style of the Latin language through exercises in composition. Prerequisite: Consent of instructor. LEC
- **LAT 701 Epic Poetry** (3). Close reading of texts from Vergil, Lucretius, Ovid. LEC
- **LAT 702 Lyric and Elegy** (3). Close reading of texts from Catullus, Horace, Ovid, Propertius, Tibullus. LEC
- **LAT 703 History, Oratory, Philosophy** (3). Close reading of texts from Livy, Tacitus, Cicero, Seneca, Augustine, Boethius. LEC
- **LAT 704 Drama, Satire, and Novel** (3). Close reading of texts from Plautus, Terence, Horace, Petronius, Seneca, Juvenal, Apuleius. LEC
- **LAT 705 Readings in Classical Latin** (3). Extensive reading in a variety of Latin authors. LEC

---

**The Clinical Child Psychology training program at KU, leading to the doctoral degree, is accredited by the American Psychological Association as a training program in clinical psychology with a child emphasis.**

Courses with a _____ at the end of their titles are typically topics or seminar courses that may be repeated for credit. Usually these courses offer different topics each time they are taught. Check with the course instructor about requirements and topics.
All students are assigned to a faculty member for academic advising. By mutual agreement, students may work with or be supervised in research and clinical work by any faculty member of the program or the sponsoring departments. For research and clinical practicum, faculty members and students are actively involved in community settings including the Bert Nash Mental Health Center, the Intensive Mental Health Program (elementary therapeutic classrooms) of the Lawrence School District, KU Medical Center, Children’s Mercy Hospital, and other agencies.

Admission
Submit your application online at www.graduate.ku.edu (College of Liberal Arts and Sciences, Clinical Child Psychology Program). Send all other requested application materials to:

The University of Kansas
Clinical Child Psychology, Dole Human Development Center
1000 Sunnyside Ave., Room 1010
Lawrence, KS 66045-7561

Admission is highly competitive. All completed files are reviewed and incoming students are selected by an admissions committee of advanced students and faculty members, headed by the training director. Essential requirements are a bachelor’s degree from an accredited institution and a record of achievement that shows a strong promise of success in course work and in research and clinical work. Applicants should have at least 15 credit hours in psychology, including statistics and research methodology. Highly rated applicants have experience appropriate to their level in psychological research and applied interactions with children. Criteria include transcripts and grade-point averages from previous educational institutions; scores on the Graduate Record Examination (verbal, quantitative, analytical, and advanced in psychology); statement of career interests; experience in research and with clinical populations, and interests in clinical and research work with faculty; a writing sample; and three letters of recommendation. Financial aid is available.

Clinical Child Psychology Curriculum
The following curriculum meets criteria for APA accreditation and KU general requirements.

Psychology Core
1. Biological Aspects: PSYC 961 Biological Foundations of Psychopathology
2. Cognitive/Affective Aspects: PSYC 870 Cognitive Development
3. Social Aspects: ABSC 825/PSYC 825 Social Development
4. History of Psychology: PSYC 805 History of Psychology or ABSC 921 The History and Systems of Psychology or PRE 988 Seminar in History of Psychology
5. Cultural and Ethnic Diversity: PSYC 888 Diversity Issues in Clinical Psychology or PRE 875 Cross-Cultural Counseling

Clinical Child Psychology Specialty Skills

Intervention and Therapy Procedures. Required: ABSC/PSYC 979 Therapeutic Interventions with Children PSYC 967 Psychotherapy with Families or PRE 956 Theory of Marriage and Family Counseling or PSYC 946 Theories and Methods of Psychotherapy or PSYC 949 Empirically Supported Treatment or PSYC 936 Group Therapeutic Techniques


Ethics/Professional Standards. Required: PSYC 975 Professional and Ethical Problems in Clinical Psychology or PRE 880 Legal, Ethical, and Professional Issues in Counseling ABSC 809/PSYC 809 Professional Issues: Clinical Child Psychology (one semester) Clinical adult psychology workshop (offered every other year)

Students are expected to function within the code of ethics in their behavior and personal demeanour. Adherence to these ethical principles is part of the regular evaluation of students for completion of the degree in clinical child psychology.

Consultation and Supervision: PRE 945 Supervision in Counseling

Research and Statistics Core Courses. Required: PSYC 815 Design and Analysis for Developmental Research or PSYC 968 Research Methods in Clinical Psychology PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance PSYC 791 Statistical Methods in Psychology II or PRE 810 Regression Analysis Alternatives to PSYC 791/PRE 810 include ABSC 735 Within Subjects Research Methodology and Direct Observation and ABSC 796 Laboratory in Behavioral Development and Modification: The Analysis of Behavior I or ABSC 940 Measurement and Experimental Design for Applied Research

Special Research Skill. Demonstrated computer competence or additional statistical or data analysis course.

Master’s Degree and Thesis. The master’s degree requires a thesis consisting of empirical research and a minimum of 30 hours of course work (24 of which must be nonthesis credit hours). A minimum of 6 credit hours in ABSC 897/PSYC 897 Master’s Thesis in Clinical Child Psychology is required.

Ph.D. Preliminary Examination: The Task. The program uses the Task system for its preliminary examination in applied/clinical area, research/methodology, or teaching. Details are available from the program director.

Ph.D. Oral Comprehensive Examination. Upon completion of all course requirements for the Ph.D. and of the Task, except for dissertation and internship, the student must pass the oral comprehensive examination. Details are available from the program director.

Doctoral Dissertation. The Ph.D. dissertation must be based on an original, empirical investigation. A minimum of 12 hours in dissertation in clinical child psychology is required.

Predoctoral Internship. An 11-month clinical internship at a setting accredited by the American Psychological Association is required. Students enroll in ABSC 963/PSYC 963 for a total of 3 credit hours.

Courses
See the course listings for the Departments of Applied Behavioral Science and Psychology.

Communication Studies
Chair: Beth Innocenti
Bailey Hall, 1440 Jayhawk Blvd., Room 112
Lawrence, KS 66045-7545, www2.ku.edu/~coms, (785) 864-9018
Graduate Director: Robert C. Rowland, 116E Bailey Hall, (785) 864-9868

Professors: Asuncion-Lande, Carlin, Hummert, Parson, Rowland

Courtesy Professors: Kemper, Shelton

Professors Emeriti: Baumgartel, Conboy, Crockett, Downs, Friedman, Gold, Kerkman, Linkugel

Associate Professors: Banwart, Baym, Beisecker, Harris, Innocenti, Kunkel, Pennington, Russo, Zhang

Assistant Professors: Bruss, Childers, D’Enbeau, Hanzal, Hall

Admission
All domestic M.A. and Ph.D. applicants on the Lawrence or Edwards Campuses must submit the Graduate Record Examination. International students who apply to Lawrence must submit Test of English as a Foreign Language scores. International students who have earned a U.S. degree must submit GRE scores. Submit your application at www.graduate.ku.edu.

Send curriculum vitae or résumé, three letters of recommendation, and a two- to three-page personal statement to:

The University of Kansas
Department of Communication Studies
Robert C. Rowland, Graduate Director
Bailey Hall, 1440 Jayhawk Blvd., Room 102
Lawrence, KS 66045-7545

M.A. Degree Requirements

Concentration in Communication Studies. For course work areas, see Ph.D. requirements.

1. Satisfactory completion of these required courses:

Communication Studies (30 hours total)

COMS 850 Introduction to Research Methods ........................................... 3
COMS 851 Communication Research: Historical and Descriptive (3) or COMS 852 Communication Research: Experimentation and Quantitative Analysis (3) ................................................................. 3

GRADUATE CATALOG
COMS 859 Prs in Communication Studies .............................................. 3
COMS 899 Master's Thesis ................................................................. 6

2. At least 6 hours in each of two areas of communication.
3. Three additional credit hours from any communication studies courses or from outside the department.
4. Final oral examination.

A non-thesis option is available in communication studies.

Requirements for this option include:

1. Satisfactory completion of these required courses:

**Communication Studies** (6 hours total)
- COMS 859 Prs in Communication Studies .............................................. 3
- COMS 850 Introduction to Research Methodology ...................................... 3

2. At least 9 hours in each of two areas of communication.
3. Six hours of electives.
4. General examination. Each student must complete an examination over the two course work concentrations. The examination is structured as follows:
   - One hour written over required courses
   - Two hours written over the first major area of communication
   - Two hours written over the second major area of communication
   - One hour oral examination

**KU Edwards Campus M.A. Program**
The M.A. also is offered on the KU Edwards Campus in Overland Park. The requirements for the degree at the Edwards Campus are the same as for the program on the Lawrence campus. Edwards Campus classes are taught by the same faculty members who teach regularly in Lawrence. Courses are scheduled during the evenings to accommodate working professionals.

**Ph.D. Degree Requirements**

**Concentration in Communication Studies.** Requirements include:

1. COMS 859, COMS 958, and COMS 959 under Basic Communication Theory (9 hours). COMS 859 is waived for students with the M.A. in communication.
2. A minimum of 27 hours of additional subject matter courses:
   - (a) These courses must represent two emphases.
   - (b) These areas are developed by the student in consultation with the adviser and the director of graduate study.
   - (c) If a student holds a master’s degree in communication studies (or equivalent), appropriate course work from this degree may be used to fulfill the subject matter course requirements. However, the total number of hours from the M.A. program used to satisfy items 2c, 3, and 4 must not exceed 24 hours.
3. Eighteen hours of electives, which may be chosen from another department or any phase of the program. The 18 hours need not be all in the same department. They may be used to broaden or intensify the program, as long as they constitute a meaningful course of study. Only 6 hours may be in independent study. Students with master’s degrees from other universities satisfy this requirement with 18 hours from their master’s programs.
4. A minimum of 15 hours of research methodology:
   - (a) Courses required of all students:
     - COMS 850 Introduction to Research Methods .............................................. 3
     - COMS 851 Communication Research: Historical and Descriptive (3) or COMS 852 Communication Research: Experimentation and Quantitative Analysis (3)
     - (b) Choose 9 additional hours from the following courses appropriate to the student’s research/dissertation interest ....................................................... 9

**Experimental and Quantitative Empirical Methods**
- COMS 856 Communication Research: Quantitative Analysis (3)
- COMS 956 Principles of Analysis of Variance (3)
- COMS 957 Principles of Correlational and Multivariate Analysis (3)

**Comprehensive examination.**
1. One hour oral examination
2. Two hours written over the second major area of communication
3. Two hours written over the first major area of communication
4. One hour written over required courses
5. In lieu of 3 hours of methodological course work, a student may elect to enroll in 3 hours of applied research in which he or she produces original research using one of the above methods. The final paper must meet the approval of the student’s adviser and must be submitted to a professional society for presentation on a convention program or to a professional journal for possible publication.
6. In lieu of 3 hours of methodological course work, a student may elect to demonstrate a high level of writing competence in one foreign language if she or he can show that knowledge of this language directly relates to his or her research and academic interests. Competence levels are determined through consultation with the appropriate language department or program.
7. Final oral examination.

**Communication Studies Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 503</td>
<td>Post-Soviet Communication (3)</td>
</tr>
<tr>
<td>COMS 530</td>
<td>Internship in Communication Studies (1-3)</td>
</tr>
<tr>
<td>COMS 531</td>
<td>Seminar in Leadership Strategies and Applications (3)</td>
</tr>
<tr>
<td>COMS 532</td>
<td>Leadership Studies Practicum (1-3)</td>
</tr>
<tr>
<td>COMS 535</td>
<td>American Public Address, Puritans to 1900 (3)</td>
</tr>
<tr>
<td>COMS 536</td>
<td>American Public Address, 1900-Present (3)</td>
</tr>
<tr>
<td>COMS 537</td>
<td>Communication in Conflict Resolution (3)</td>
</tr>
<tr>
<td>COMS 538</td>
<td>Persuasion Theory and Research (3)</td>
</tr>
<tr>
<td>COMS 539</td>
<td>Argumentation (3)</td>
</tr>
<tr>
<td>COMS 543</td>
<td>Group Leadership Practicum (1-3)</td>
</tr>
<tr>
<td>COMS 544</td>
<td>Advanced Interpersonal Communication: Theories and Research (3)</td>
</tr>
<tr>
<td>COMS 545</td>
<td>Narratives in Oral Communication (3)</td>
</tr>
<tr>
<td>COMS 546</td>
<td>Communication Across the Life Span (3)</td>
</tr>
<tr>
<td>COMS 547</td>
<td>Communication and Culture (3)</td>
</tr>
<tr>
<td>COMS 548</td>
<td>Theories of the Interview (3)</td>
</tr>
<tr>
<td>COMS 549</td>
<td>Communication in Service and Sales (3)</td>
</tr>
<tr>
<td>COMS 550</td>
<td>Ethical Issues in Public Communication (3)</td>
</tr>
<tr>
<td>COMS 551</td>
<td>The Rhetoric of Black Americans (3)</td>
</tr>
<tr>
<td>COMS 552</td>
<td>The Rhetoric of Women’s Rights (3)</td>
</tr>
<tr>
<td>COMS 553</td>
<td>Communication in Political Campaigns (3)</td>
</tr>
<tr>
<td>COMS 559</td>
<td>Seminar in: _____ (1-3)</td>
</tr>
<tr>
<td>COMS 560</td>
<td>Seminar in: _____ (3)</td>
</tr>
<tr>
<td>COMS 569</td>
<td>Nonverbal Communication (3)</td>
</tr>
<tr>
<td>COMS 603</td>
<td>Topics in Presidential Rhetoric: _____ (3)</td>
</tr>
<tr>
<td>COMS 605</td>
<td>Speech Writing (3)</td>
</tr>
<tr>
<td>COMS 607</td>
<td>Political Communication (3)</td>
</tr>
<tr>
<td>COMS 620</td>
<td>Communication and New Technology (3)</td>
</tr>
<tr>
<td>COMS 639</td>
<td>Legal Communication (3)</td>
</tr>
<tr>
<td>COMS 647</td>
<td>Issues in Intercultural Communication (3)</td>
</tr>
<tr>
<td>COMS 667</td>
<td>Interpersonal Communication in Multinational Organizations (3)</td>
</tr>
<tr>
<td>COMS 669</td>
<td>Human Conflict and Peace (3)</td>
</tr>
<tr>
<td>COMS 710</td>
<td>Survey of Theory and Research in Organizational Communication (3)</td>
</tr>
</tbody>
</table>

In 2009, a two-member KU debate team won the National Debate Tournament. The outstanding debate program at KU holds several national distinctions, including the first pair of debaters to win more than 400 debates in their college careers.

KU’s Edwards Campus is at 12600 Quivira Road, Overland Park, KS 66213-2402, phone (from Lawrence): 864-8400 or (913) 897-8400, http://edwardscampus.ku.edu.
and systems theory, as well as cultural, critical, and various interpretive approaches to understanding communication in organizational contexts. Prerequisite: COMS 310 and permission of the instructor. LEC

COMS 730 Writing and Speaking for Decision Makers (3). Theory and application of communication strategies for corporate communication. This course presents rhetorical and interpersonal strategies to influence decision-makers. Included are informative and persuasive communications such as board presentations, requests for proposal and responses to RFPs, grant proposals, and persuasive presentations for adoption, implementation, or evaluation of organizational programs. Limited to Regents Center students. LEC

COMS 741 Special Topics in Communication Studies: (2-3). Examination of special topics in Communication Studies. Prerequisite: Instructor consent. LEC

COMS 784 Proseminar in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. Prerequisite: PSIY 378, Same as SPLH 784. Same as SPLH 784. Prerequisite: Consent of instructor. LEC

COMS 787 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABSC 787, AMS 787, PSYC 787, and SOC 787.) (Formerly HDSL 787.) LEC

COMS 807 Rhetoric, Politics, and the Mass Media (3). This course investigates the ways in which rhetorical strategies (persuasive and linguistic usage) permeate the relationship between politics and the mass media. We will analyze media coverage of political debates, the presidential use of radio, television and press conferences, the network evening news coverage of political events, the influence of political advertising of political debates, the presidential use of radio, television and press conferences, the network evening news coverage of political events, the influence of political advertising and persuasive presentations for adoption, implementation, or evaluation of organizational programs. Limited to Regents Center students. LEC

COMS 810 Organizational Communication: Theory and Research (3). This course examines the theoretical and philosophical underpinnings of organizational communication research, with special attention to theoretical variables analysis, and to intercultural, critical, and various interpretive approaches to understanding communication in organizational contexts. Prerequisite: COMS 310 and permission of the instructor. LEC

COMS 835 Impression Formation and Interpersonal Behavior (3). Intensive investigation of the processes involved in impression formation and of the effects of established impressions upon interpersonal communication. (Same as PSYC 845.) Graded on a satisfactory/fail basis. Prerequisite: COMS 355 or PSYC 670. LEC

COMS 843 Changing Communication Behavior (3). Study of theory, research, and methods for changing communication behaviors in teaching, training, consulting, coaching, and counseling contexts. LEC

COMS 844 Seminar in Interpersonal Communication (3). This class will address current theory and research in interpersonal communication. Issues addressed may include verbal and nonverbal communication in families, close relationships, initial interactions, and the like. LEC

COMS 846 Communication and Aging (3). Examination of the interrelationships between communication and the aging process. The course will include current research and theory on such topics as intergenerational communication, language and age, the life cycle, aging and caregiving, mass media and aging, and health communication, and others of current interest in the field. LEC

COMS 848 Communication Audits in Organizations (3). The principal thrust of this course is a hands-on analysis of the communication in 1-2 organizations. Students will, as a class, analyze data collected regarding communication channels, job satisfaction, organizational commitment, and communication strategies. Experience is gained in organizational research methods, instrument development, feedback, and the utilization of communication methodologies. LEC

COMS 850 Introduction to Research Methods (3). An introduction to methodological approaches to the study of communication. Approaches considered will include (a) how to conduct research in communication and evaluation of the outcomes of implementing workplace communication technologies, and (b) how to incorporate computer-supported decision making. Emphasis is on understanding organizational communication patterns, participant responses to the technologies, and the evaluation of the outcomes of implementing work-place communication technologies. To be taken by Regents Center students in some phase of science teaching or the teaching of speech and drama. RSH

COMS 898 Investigation and Conference (for Master's Candidates) (1-8). Limited to eight hours credit toward the M.A. degree. Directed research and experimentation for M.A. students in some phase of science teaching or the teaching of speech and drama. RSH

COMS 899 Master's Thesis (1-6). THE

COMS 907 Seminar in Political Communication (3). This course will focus on contemporary political communication theory and illustrate how such theories are exemplified in modern political contexts: political arguments and developing consensus, communication strategies in Congressional and bureaucratic decision making, the rhetorical presidency, the impersonation of political information, political narrative, and political campaigns. LEC

COMS 930 Seminar in Speech: (1-4). Special problems in speech. Prerequisite: Twelve hours of credit in the department. LEC

COMS 932 Theories of Rhetoric: Classical (3). An intensive study of the rhetorical theories of classical writers from 646 B.C. to the decline of Roman oratory. Principal emphasis will be on Isocrates, Plato, Aristotle, Quintilian, Cicero, and Longinus. LEC

COMS 933 Theories of Rhetoric: Neo-Classical (2-3). A study of the development of rhetorical theory from Socrates to the early 19th century. Notable departures from the classical tradition will be examined. Prerequisite: Consent of instructor. LEC

COMS 936 Seminar in Language and Discourse (3). This seminar uses interdisciplinary approaches to examine issues of language and discourse in all aspects of communication. The course moves from considering major theoretical positions to current research in communication on discourse. Methodological issues in the study of language and discourse are also addressed. LEC

COMS 938 Seminar in Persuasion (2-3). Examination of selected topics in persuasion, with emphasis on the application of recent theories and experimental research to the analysis of persuasive discourse. Prerequisite: COMS 538 or equivalent. LEC

COMS 939 Seminar in Argumentation (2-3). Examination of special problems in argumentation, with emphasis on the relationship of systems of argumentation to their logical presuppositions. Discussion of the writings of Toulmin, Nanson, Johnstone, Perelman, Dewey. Prerequisite: COMS 539 or equivalent. LEC

COMS 941 Seminar in Health Communications (3). This course is a survey of the study of health communication. Theories of the process of health communication, with emphasis on the relationship of systems of argumentation to their logical presuppositions. Discussion of the writings of Toulmin, Nanson, Johnstone, Perelman, Dewey. Prerequisite: COMS 539 or equivalent. LEC

COMS 942 Seminar in Small Group Communication (2-3). Study of communication in face-to-face and co-acting groups. Analysis of research in group communication. LEC

COMS 943 Seminar in Human Relations Training Theory (3). Concepts and practices of various approaches to teaching and training in human relations. Theories of human relations training and the role of the trainer. Current issues in training; sensitivity approaches, instrumented groups, theory of structured exercises, laboratory planning. Prerequisite: COMS 540, COMS 549, or PSYC 570. LEC

COMS 944 Practicum in Human Relations Instruction (3). Supervised practicum in the application of approaches in human relations training. Prerequisite: COMS 540, 549, and consent of instructor. LEC

COMS 945 Seminar in Social Support (3). This course is a survey of the many disciplines of the fundamental form of communication known as social or emotional support. Comprised of the major components, including the utilization of interpersonal communication, and others of current interest in the field. LEC

COMS 946 Seminar in Communication and Intergroup Relations (3). Conceptual and theoretical frameworks for exploring and understanding relationships between individuals from different societal groups (e.g., cultural/ethnic, gender, age). Focus on issues of identity, power relations as manifested in interpersonal, mass media, and organizational contexts. The course will include methodological and applied implications for studying different groups, both within the U.S. and around the world. LEC

COMS 947 Communication Cultural Innovation and National Development (3). An examination of the role of speech and other types of communication in the introduction of change within cultures and the diffusion of innovation between cultures. Specific communication technologies and practices, such as education, internet, national aid, military assistance, and public health will be discussed. LEC

COMS 948 Seminar in Organizational Communication (2-3). Analysis of speech communication functions in the organizational structures of business, industry, labor, military, education, government, and NGOs. Development of conceptual schemes for conducting research and training programs. Speech systems which characterize the operation of organized groups. LEC

COMS 949 Communication Strategies and Human Resources (3). Leadership and human resource theories are analyzed in terms of the development of communication strategies in organizations. Applications are made to working with and communicating with managers, training, group development, motivation, and organizational development. LEC

COMS 950 Seminar in Public Address: (1-6). THE

COMS 951 Seminar in Movement Theory and Genre Criticism (3). This course examines the theoretical and methodological underpinnings of approaches to...
rhetorical analysis focusing on social movements and rhetorical genres. It will review existing theory on these topics, develop a methodological approach to both forms of critical analysis, and test each methodological approach via case studies. Prerequisite: COMS 755 or consent of instructor. LEC

**COMS 952 Seminar in Mythic and Narrative Approaches to Rhetorical Criticism** (3). This course examines theoretical and methodological underpinnings of approaches to rhetorical analysis focusing on narrative rhetoric, with a special emphasis on myth as a type of narrative. It will review existing theory on these topics, consider a variety of alternative methodological approaches, and test each methodological approach via case studies. Prerequisite: COMS 755 or consent of instructor. LEC

**COMS 953 Seminar in Organizational Rhetoric** (3). This course focuses on theoretical and methodological materials related to the use of rhetoric in an organizational setting. It will review existing theory and methodological development on this topic, pay special attention to the distinction between rhetoric used within an organization and rhetoric focused on audiences external to the organization. Multiple case-studies will be considered to illustrate the functioning of both internal and external organizational rhetoric. Prerequisite: COMS 755 or consent of instructor. LEC

**COMS 954 Computer Applications in Communication Research** (3). An introduction to the principles of digital computer operation and survey of their applications to problems in communication research. Topics considered will include the features of computer installations in general and at KU, flow-charting, FORTRAN and other computer languages, and numerical and non-numerical applications. Practical programming experience will be required of all students during the course. LEC

**COMS 955 Seminar in Rhetorical Criticism** (3). A study of contemporary and historical writings on rhetorical criticism. Emphasis is placed upon the development of critical methodology for future research and writing. Prerequisite: COMS 755. LEC

**COMS 956 Principles of Analysis of Variance** (3). An examination of experimental designs based on the analysis of variance. Topics considered will include factorial designs, trend analysis, confounding, counterbalanced designs, and analysis of covariance. Prerequisite: COMS 756. LEC

**COMS 957 Principles of Correlational and Multivariate Analysis** (3). An examination of procedures to identify relationship patterns in descriptive data. The focus will be on multivariate procedures. Topics considered will include multiple and partial correlation, factor analysis, and discriminant analysis. Prerequisite: COMS 756. LEC

**COMS 958 Comparative Theories of Speech Communication** (3). A descriptive and comparative analysis of theories of communication applicable to speech behavior. Prerequisite: COMS 859 or equivalent. LEC

**COMS 959 Theories of Rhetoric: Contemporary** (3). A study of the writings on rhetorical theory in the twentieth century. Principal emphasis will be on the psychological treatment of rhetoric. L.A. Richards and Kenneth Burke, and the relationship in the twentieth century between rhetoric and dialectic, rhetoric and poetic. Prerequisite: COMS 859 or equivalent. LEC

**COMS 957 Research in Intercampus Program** (1-6). Supervised research under the direction of a faculty member on a topic of mutual interest to the faculty and graduate student. RSH

**COMS 998 Investigation and Conference (for Doctoral Candidates)** (1-8). (Limited to six hours credit towards the Ph.D. degree.) Directed research and experimentation for Ph.D. students in some phase of speech science or the teaching of speech and drama. RSH

**COMS 999 Doctoral Dissertation** (1-12). THE

---

**Communicative Disorders: Intercampus Program**

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing; Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus. Audiology courses are listed under Communicative Disorders: Intercampus Program in the School of Allied Health chapter of this catalog. Speech-Language Pathology courses are listed in this section.

**Speech-Language-Hearing: Sciences and Disorders, Lawrence:**
Chair: Hugh Catts, catts@ku.edu
Dole Human Development Center, 100 Sunny side Ave., Room 3001 Lawrence, KS 66045-7561, www2.ku.edu/~splh, (785) 864-0630

**Hearing and Speech, KU Medical Center:**
Chair: John Ferraro, jferraro@kumc.edu
KU Medical Center, 3031 H.C. Miller Building, Mail Stop 3039
3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-5937

**Professors:** Barlow, Catts, Ferraro, Fey, Rice
**Professors Emeriti:** Brandt, Diedrich, Marston, McReynolds, Michel, Salmon, Schiefelbusch
**Clinical Professors:** Bunce, Wegner
**Associate Professors:** Chertoff, Jackson, Loeb, Searl, Storkel, Widen
**Associate Professor Emerita:** Carpenter

---

**Assistant Professors:** Auer, Brady, Ferguson, Johnson
**Clinical Assistant Professors:** Banks, Daniels, Gatts, Keener, Kennalley

Clinical Instructors: Gillispie, Haring, Johnston, Pedersen, Waggoner

The Intercampus Program in Communicative Disorders is directed by a committee of faculty members of professorial rank from each of the cooperating departments. The committee is responsible for instruction, curriculum planning, student selection and advising, clinical practicum policies, and course scheduling. Its recommendations are subject to review by the departments.

The program offers the Master of Arts and Doctor of Philosophy degrees in speech-language pathology, and the Doctor of Audiology (Au.D.) and Ph.D. in audiology. A combined Au.D./Ph.D. track also is available. This track facilitates the completion of both degrees in a six-year post-baccalaureate period. The Lawrence department collaborates with the Departments of Applied Behavioral Science, Linguistics, and Psychology to offer a Ph.D. in child language.

---

**Intercampus Programs**

Students pursuing graduate degrees in the programs administered by the intercampus committee take course work on the Medical Center campus in Kansas City and on the main campus in Lawrence. A student may live in either community. Block scheduling of courses reduces the frequency of commuting.

**Admission.** Submit your application online at www2.ku.edu. Send all other requested application materials to:

The University of Kansas Medical Center
Department of Hearing and Speech, 3031 H.C. Miller Bldg.
Mail Stop 3039, 3901 Rainbow Blvd.
Kansas City, KS 66160

**Master's Degree Programs**

**Requirements for the M.A. Degree with a Major in Speech-Language Pathology.** Prerequisites:

- An acceptable bachelor’s degree
- Thirty-four hours of credit in speech-language-hearing, including SPLH 120, SPLH 261, SPLH 320, SPLH 465, SPLH 466, SPLH 565, SPLH 660, SPLH 662, SPLH 663, SPLH 668, and SPLH 671, or their equivalents
- Twenty hours of credit in allied fields, including courses in physiology, linguistics, and psychology

**Degree Requirements:** The program requires 34 credit hours of experiences for breadth and an additional 12 to 16 hours for depth.

**Required Graduate Experiences for Breadth**

- SPLH 764 Seminar in Multicultural Issues ........................................... 2
- SPLH 860 Evaluation of Speech and Language ........................................ 2
- SPLH 862 Clinical Processes ................................................................. 2
- SPLH 864 Advanced Clinical Practice in Speech-Language Pathology ............ 7
- SPLH 868 Professional Seminar ............................................................ 2
- Research experience (thesis or nonthesis option) ..................................... 3
- SPLH electives (Eight 2-credit-hour seminars) ......................................... 16

**Required Graduate Experiences for Depth**

- SPLH 866 Field Study in Speech-Language Pathology ................................ 5
- Advanced electives, theory on topics external to the organization, or thesis) ................................................................. 6
- Second field study or fourth practicum experience .................................... 1-5

Students also must pass the Speech-Language Pathology PRAXIS examination with a score of at least 600.

**Requirements for the M.S. in Education Degree with a Specialization in Deaf Education.** For information, see Special Education in the School of Education chapter of this catalog.

**Au.D. Degree Requirements: Audiology**

The Au.D. program prepares students to meet the academic and clinical requirements for the ASHA Certificate of Clinical Competence; it is fully accredited by the ASHA Council on Academic Accreditation. The degree is designed to be completed in four years (including summers, with a common entry point in
Program Guide Beyond the Baccalaureate Level. Upon admission, the student and his or her adviser choose a doctoral advisory committee. This committee begins its function as soon as possible and approves the student’s program by no later than the end of the second semester of residence. The three-person committee must include the student’s adviser and at least one additional member from the intercampus executive committee. The committee works with the student in planning a program consonant with the career goals of the student and the resources of the department. The committee is responsible for guiding the student’s progress through the selected program of study.

To meet general requirements, the Ph.D. aspirant must pass an oral comprehensive examination. Before being admitted to this examination, the student must have satisfied (1) the majority of course requirements (defined by the advisory committee) in the student’s emphasis area (a minimum of 40 graduate credit hours in the major interest, which may include hours accumulated toward a master’s degree); (2) 15 graduate hours in research; (3) a minimum of 12 graduate hours in a cumulative area outside the student’s major emphasis; and (4) satisfactory performance on a written preliminary examination encompassing the student’s emphasis area and research skills. Students also must complete the FLORS requirement as outlined in the Ph.D. Handbook of the Intercampus Program.

After the student has passed the comprehensive examination, she or he must complete a research project approved by a committee of three faculty members and write a dissertation based on that research. The dissertation is expected to be a scholarly work that reflects the student’s ability to conduct independent, original research. A minimum of 10 hours of dissertation credit is required. Completion of the dissertation is followed by the final oral examination and defense of the dissertation. Additional information about the department and about faculty research interests is contained in a departmental brochure available upon request.

Child Language Program

For information on the Ph.D. in Child Language, see Child Language in this chapter of the catalog.

Financial Aid

Students in the speech-language pathology and audiology programs may apply for teaching, clinical, and research assistantships, U.S. Office of Education fellowships, Veterans’ Administration Hospital traineeships, and other types of financial assistance.

Speech-Language-Hearing: Sciences and Disorders Courses

For courses in Audiology, see the School of Allied Health chapter of this catalog.

SPLH 565 Language Sample Analysis Lab (1).
SPLH 566 Language Development (3). 4
SPLH 662 Principles of Speech Science (3).
SPLH 663 Principles of Hearing Science (3).
SPLH 668 Introduction to Audiological Assessment and Rehabilitation (4).
SPLH 670 Beginning Clinical Practice in Audiology (1-3).
SPLH 671 Introduction to Speech-Language Pathology (4).
SPLH 672 Clinical Practice in Speech-Language Pathology (3).
SPLH 699 Speech-Language Pathology (3).
SPLH 761 Aural Rehabilitation (3). Study of the communication problems associated with hearing loss. Introduction to aural habilitation related to speech, language, and academic achievement in children with early hearing loss, as well as, communication strategies training for adults with acquired hearing loss. Prerequisite: SPLH 669 or equivalent. LEC.
SPLH 764 Seminar in (1-3). The subject matter of this seminar will be special topics from speech pathology and audiology. Special prerequisite may be established for a given topic. LEC.
SPLH 784 Proseminar in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in
communication and aging. May be repeated for credit. (Same as COMS 784.) (Same as PSYC 784.) Prerequisite: Consent of instructor. LEC

SPLH 799 Proseminar in Child Language (2). A review and discussion of current issues in children’s language acquisition. May be repeated for credit. Students are graded S/F. (Same as ABC 799, LING 799 and PSY 799). (Formerly HDPL 797.) LEC

SPLH 816 Language Development (3). Study of language acquisition in children, including the morphologic, syntactic, and semantic components. Methods of language measurement, the role of comprehension, and pragmatic aspects of language use will be included. Not open to students who have credit for SPLH 566. Laboratory by appointment.

SPLH 820 Developmental Phonological Disorders (2). Focuses on speech and non-speech characteristics of children with developmental disorders. Emphasis placed on collection of phonetic transcription of speech samples, phonological analysis of transcribed data, and decision-making processes in assessment and intervention. LEC

SPLH 822 Dysarthria/Apraxia (2). This course describes the neuroanatomical bases of motor-speech processes, the diagnosis, classification, assessment, prognosis, and treatment of dysarthria(s) and apraxia(s). LEC

SPLH 824 Fluency Disorders (2). The nature of stuttering in children and adults is discussed. Theories regarding etiology, development, and maintenance of the disorder are presented. Emphasis is placed on various clinical approaches to assessment, measurement, and treatment. LEC

SPLH 826 Phonatory Disorders (2). This course reviews the function of the laryngeal and respiratory mechanisms including the parameters and processes of phonation. Primary content addresses diagnosis, description, and treatment of organic and non-organic disorders of phonation. LEC

SPLH 828 Speech Disorders in Special Populations (2). This course reviews anatomy and physiology of the velopharyngeal mechanism. Diagnosis and management of velopharyngeal dysfunction and associated problems considered. Anatomy, physiology, and rehabilitation associated with certain oral, pharyngeal, and laryngeal abnormalities discussed. Emphasis is on the speech problems of adults following medical management. Populations include individuals with laryngeotomies, glossectomies, and tracheotomies. LEC

SPLH 832 Dysphagia (2). This course covers normal and disordered swallowing. Evaluation and treatment of swallowing disorders, the dysphagia team, and dysphagia in special populations are considered. LEC

SPLH 836 Genetics of Communication and Learning Disorders (2). This course focuses on the description, assessment, and treatment of communication problems associated with particular genetic syndromes (e.g., Down’s, Turner’s syndromes). Also covered are current data about the genes involved in nonsyndromic communication and learning problems, such as those commonly seen in the schools. Ethical and practical issues in these areas are discussed. LEC

SPLH 840 Language Disorders of Children: Infants and Toddlers (2). This course examines language development and communication. This course is designed for students who will go on to work with children in the birth to three population. At-risk populations, as well as those with known etiologies, are considered. Information on assessment, intervention, and service delivery models is addressed. Issues relating to Public Law 99-457 are also examined. LEC

SPLH 842 Language Disordered Children: Preschool (2). This course examines language disorders of preschool-age children in the late preschool years. The course includes information on incidence, characteristics, assessment, and intervention. Theoretical issues and their implication for language intervention are also examined. LEC

SPLH 844 Language Disorders of Children: School Age (2). This course examines language development during the school years and how problems in this development interact with school performance. Emphasis is placed on the role of the speech-language pathologist in the early identification, assessment, and remediation of language-learning problems. LEC

SPLH 846 Language Disorders of Adults (2). Neurological aspects of language processes, classification of aphasia, and assessment of language deficits are discussed. Models and treatment approaches including intervention strategies and rehabilitation are also considered. LEC

SPLH 848 Language Disorders of Special Populations (2). This course focuses on the unique language impairments of individuals with mental retardation, autism, cerebral palsy, hearing impairments, dual sensory impairments, and other communication disorders (e.g., ADD). Language characteristics as well as assessment and intervention strategies are studied. LEC

SPLH 850 Language Disorders Secondary to Closed Head Injury and Dementia (2). Neuroanatomy and physiology relevant to diffuse brain injury are discussed. Characteristics and intervention strategies relating to traumatic brain injury and dementia are studied. LEC

The 2009 edition of U.S. News & World Report’s “America’s Best Graduate Schools” ranked KU’s graduate program in speech-language pathology fourth in the nation. KU’s audiology program ranked seventh nationwide.

Certification as a speech-language pathologist in Kansas public schools requires a master’s degree.

For AUD courses, see the School of Allied Health chapter of this catalog.

SPLH 852 Augmentative and Alternative Communication (2). This course describes augmentative and alternative communication (AAC) assessment and intervention issues as they apply to children and adults with both congenital and acquired speech and/or language disabilities. Areas of study include AAC systems, assessment strategies and procedures, intervention strategies, and AAC information resources. LEC

SPLH 854 Receptive Disorders (2). This course addresses the perceptual, linguistic, and cognitive processes utilized in written communication. Acquired and development disorders of written language are examined in relation to issues concerning characteristics, etiology, early identification, assessment, and remediation. LEC

SPLH 860 Language and Evaluation of Speech and Language (2). A framework for speech and language evaluations. Issues related to initiation and termination of treatment are discussed. Practice is provided in evaluating norm- and criterion-referenced information used in diagnostic, referral, and treatment decisions. LEC

SPLH 861 Seminar in Research Methodology in Speech Pathology and Audiology (3). This seminar is concerned with the design, instrumentation, execution, and reporting of research in audiology and speech pathology. SPLH 760 or its equivalent and some statistics are recommended before entering this seminar. LEC

SPLH 862 Clinical Processes (1). Orients student to clinical procedures, policies, requirements, and expectations of program. Therapy models, planning, and philosophies are discussed along with implementation and evaluation of therapy procedures. Professional issues are also considered. May be repeated for credit. LEC

SPLH 864 Advanced Clinical Practice in Speech-Language Pathology (1-6). Students conduct supervised clinical work in a variety of settings. May be repeated for credit. Prerequisite: Department approval. Group and individual conferences with staff required. FLD

SPLH 866 Field Study in Speech-Language Pathology (5-12). The field study provides work experiences in clinical and/or research activities. The student takes the course near the end of the degree program. Assignments include supervised work in a variety of approved settings. May be repeated for credit. Prerequisite: Adviser’s consent. FLD

SPLH 868 Professional Seminar (1). Forum for the presentation and discussion of scientific and professional issues by faculty and advanced graduate students. May be repeated for credit. LEC

SPLH 874 Research Practicum (3). Application of research methodology in a laboratory situation. Emphasis is on direct participation in designing and conducting an experimental investigation in speech or hearing. Prerequisite: SPLH 760. FLD

SPLH 876 Independent Study in Problems of Speech, Language, and Hearing (1-6). Investigation of special topics by individual master’s level students. Paper required. Prerequisite: Consent of instructor. RSH

SPLH 880 Seminar in Speech-Language Pathology: _____ (1-3). May be repeated for credit. LEC

SPLH 899 Investigation and Conference (for Master’s Candidates) (1-8). (Limited to eight hours credit toward the M.A. degree.) Directed research and experimentation for M.A. students in some phase of speech science. RSH

SPLH 899 Master’s Thesis (1-6). THE

SPLH 911 Experimental Phonetics I (3). This course will provide a description of the acoustic properties of the major classes of speech sounds, and will describe how these properties are utilized perceptually. It will also provide an understanding of the acoustic theory of speech production, and will discuss the implications of that theory relative to the modification of impaired speech. LEC

SPLH 912 Experimental Phonetics II (3). This course will examine the current methodologies utilized in speech physiology research, and will review the findings of recent research into the movement patterns of individual speech articulators. The course will emphasize the interpretation of individual research results in terms of an overall theory of speech motor timing and control. LEC

SPLH 936 Seminar in Hearing Science (3). Considers more advanced research problems in hearing science including psychoacoustics, speech perception, physiology. Prerequisite: Consent of instructor. LEC

SPLH 961 Experimental Phonetics I (3). This course will provide a description of the acoustic properties of the major classes of speech sounds, and will describe how these properties are utilized perceptually. It will also provide an understanding of the acoustic theory of speech production, and will discuss the implications of that theory relative to the modification of impaired speech. LEC

SPLH 962 Experimental Phonetics II (3). This course will examine the current methodologies utilized in speech physiology research, and will review the findings of recent research into the movement patterns of individual speech articulators. The course will emphasize the interpretation of individual research results in terms of an overall theory of speech motor timing and control. LEC

SPLH 965 Laboratorial Instrumentation for Speech and Hearing Research (3). Instruments for speech and hearing research, their design and application. Experimental
mental projects using laboratory equipment. Designing equipment for special purposes. Prerequisite: SPLH 962. FLD

SPLH 970 Independent Study in Problems of Speech and Hearing (1-6). Investigation of special topics by individual students. Paper required. RSH

SPLH 972 Extensions of Clinical Management (3). This course is designed to provide didactic and practical experience in methods of obtaining diagnostic information and generalization of speech and language responses away from the clinical setting. Models for effecting behavioral change and data collection will be discussed and utilized. FLD

SPLH 974 Research Practicum (3). Application of research methodology in a laboratory situation. Emphasis is on direct participation in designing and conducting an experimental investigation in speech or hearing. Prerequisite: SPLH 760. FLD

SPLH 975 Directed Teaching: Speech Pathology and Audiology (1-3). Provides experiences in classroom and laboratory instruction under supervision of graduate faculty. Variable credit to reflect amount of instructional responsibility assumed. May be repeated up to a maximum of six semester hours. FLD

SPLH 982 Issues in Scientific Conduct (3). Lectures and discussion on issues in the conduct of a scientific career, with emphasis on practical topics of special importance in behavioral science. Topics will include the academic and scientific roles of behavioral scientists, establishing a research lab, communicating research findings, tenure processes, gender equity, ethical conduct, and good scientific citizenship. Discussions will highlight important case studies. (Same as PSYC 982.) LEC

SPLH 998 Investigation and Conference (for Doctoral Candidates) (1-8). (Limited to eight hours credit towards the Ph.D. degree.) Directed research and experimentation for Ph.D. students in some phase of speech science. RSH

SPLH 999 Doctoral Dissertation (1-12). THE

Computer Science

See Electrical Engineering and Computer Science in the School of Engineering chapter of this catalog.

Croatian/Serbian

See Slavic Languages and Literatures.

Czech

See Slavic Languages and Literatures.

Dance

See Dance in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

Drama

See Theatre in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

East Asian Languages and Cultures

Chair: Maggie Childs
Graduate Adviser: Keith McMahon
Wescoe Hall, 1445 Jayhawk Blvd., Room 2118
Lawrence, KS 66045-7594, www2.ku.edu/~ealc, (785) 864-3100
Professor: McMahon
Associate Professors: Childs, Gerbert
Assistant Professors: Eda, Li, Williams, Xiao, Yun

The Department of East Asian Languages and Cultures is the only department in Kansas offering a regular program of instruction in the languages, literatures, and cultures of East Asia.

The areas of East Asia covered represent three of the oldest continuous civilizations of the world. The great historical contributions of China, Japan, and Korea in literature, philosophy, and art are widely recognized and studied throughout the world. Today, the highly advanced industries of Japan, the enormous human resources of China, and the rapidly growing economies of Korea and Taiwan have contributed to the development of extremely valuable socio-political and economic ties between these areas and the United States. The program trains people who will devote themselves to becoming effective links between the Far East and the United States.

Admission

Graduate Record Examination verbal and analytical test scores are required. Submit your application online at www.graduate.ku.edu. The application deadline for fall enrollment is May 1. Send all other requested application materials to

The University of Kansas
Department of East Asian Languages and Cultures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2118
Lawrence, KS 66045-7594

Master’s Program

The department offers a master’s degree in East Asian languages and cultures. The student declares his or her concentration in one of three options.

• Chinese language and literature
• Japanese language and literature
• East Asian cultures

Students of Chinese or Japanese language and literature gain in-depth knowledge of these ancient civilizations, which have produced some of the world’s greatest literature.

Students of East Asian cultures develop a broad interdisciplinary knowledge of East Asia. This concentration is for students pursuing professional or noncollege teaching careers, for students in the early stages of language training, or for students who have already acquired competence in an East Asian language.

Prerequisites. Entrance requirements for a concentration in either Chinese or Japanese language and literature include

• Three years of the modern language and, for Chinese language students, one year of classical Chinese or the demonstrated equivalent. Students not meeting this prerequisite may be admitted with deficiencies provided they achieve this level of proficiency outside the minimum of 30 graduate credit hours required for the degree.
• Two lecture courses dealing with East Asia.

Entrance requirements for a concentration in East Asian cultures are

• At least two years of an East Asian language. Students not meeting this prerequisite may be admitted with deficiencies provided they achieve this level of proficiency outside the minimum of 30 graduate credit hours required for the degree.
• Two lecture courses dealing with East Asia.

Requirements for Chinese or Japanese Language and Literature Concentration

1. A minimum of 30 graduate credit hours:
   (a) Fourth-year level of language courses.
   (b) At least 18 credit hours must be taken in the department in residence.
   (c) Six of these 18 credit hours must demonstrate research capacity in the student’s major language in lecture courses or seminars.
   (d) EALC 700 Introduction to East Asian Studies and the relevant bibliography course must be included.
   (e) No more than 3 hours of directed readings courses may be included in the required 30 hours.
   (f) Students are expected to take at least one course at the 500 level or above in the literature of their concentration.
   (g) Students must take one course that deals wholly with an East Asian country outside their concentration.
   (h) A thesis (3 credit hours) involving significant use of materials in the student’s major language.

Requirements for East Asian Cultures Concentration

1. A minimum of 30 graduate credit hours:
   (a) Third-year level of language courses.
   (b) At least 24 credit hours, taken in the department in residence.
   (c) EALC 700 Introduction to East Asian Studies must be included in the student’s curriculum.
   (d) Students are expected to select one of the East Asian cultures for concentration and to include in their programs at least two courses dealing wholly with an East Asian culture outside their concentrations.
   (e) Students may not take more than 3 hours of directed readings.
   (f) Students must, in consultation with the department graduate adviser, take other credit hours in a discipline or disciplines closely related to their studies. East Asian area courses are offered in anthropology, film and media studies,
geography, history, history of art, linguistics, philosophy, political science, religious studies, sociology, and theatre.

(g) Students must take one course at the 500 level or above in the literature or thought of the country of their concentration.

2. A thesis (3 credit hours) that must deal with a subject in the concentration chosen by the student.

East Asian Courses in Other Departments

Anthropology
ANTH 565 Popular Images in Japanese Culture, Literatures, and Films

Economics
ECON 583 Economic Issues of East Asia

Film and Media Studies
FMS 541 Asian Film
FMS 743 Contemporary Japanese Film

Geography
GEOG 596 Geography of China
GEOG 796 Asian Regions: ________

History
HIST 510 Topics in: ________
HIST 582 Ancient Japan
HIST 583 Imperial China
HIST 584 Modern China
HIST 587 Early Modern Japan
HIST 588 Japan, 1853-1945
HIST 589 Japan since 1945
HIST 593 Modern Korea
HIST 605 Medieval Japan
HIST 636 Seminar in: ________

History of Art
HA 503 Japanese Prints
HA 545 Early Chinese Art
HA 667 Art of Modern China
HA 705 Major Artists: ________
HA 766 Calligraphy of China and Japan
HA 782 Japanese Painting
HA 783 Edo Period Painting
HA 785 Masters of Sung and Yuan Dynasty Painting
HA 786 Masters of Ming and Ch’ing Dynasty Painting
HA 787 Chinese Painting
HA 788 Proseminar in Japanese Art
HA 789 Proseminar in Chinese Art
HA 822 Seminar in Buddhist Art: ________
HA 824 Seminar in Edo Period Painting: ________
HA 825 Seminar in Zen Painting and Calligraphy
HA 826 Seminar in Japanese Literati Art
HA 980 Seminar in Chinese Art: ________
HA 990 Seminar in Japanese Art: ________

Political Science
POLS 656 Governments and Politics of East Asia
POLS 668 Reform in Contemporary China
POLS 676 International Relations of Asia
POLS 678 Chinese Foreign Policy
POLS 956 The Governments and Politics of Asia

Religious Studies
REL 508 Religion in China
REL 509 Religion in Japan
REL 510 Religion in Korea
REL 733 Seminar in Eastern Religious Texts: ________
REL 762 Seminar in Eastern Religions: Thought: ________
REL 776 Seminar in Religion and Society in Asia: ________

Theatre
THR 527 Asian Theatre and Performance

For additional courses in the above disciplines, see appropriate sections in this chapter of the catalog.

Chinese Courses

CHIN 504 Advanced Modern Chinese I (5).
CHIN 508 Advanced Modern Chinese II (5).
CHIN 512 Advanced Chinese I (2).
CHIN 513 Advanced Chinese II (2).
CHIN 542 Introduction to Classical Chinese I (3).
CHIN 544 Introduction to Classical Chinese II (3).
CHIN 562 Modern Chinese Literature I (3). NW
CHIN 564 Modern Chinese Literature II (3).
CHIN 580 Introduction to Chinese Research Materials (1).
CHIN 598 Readings in: ________ (1-3).
CHIN 690 Seminar in Chinese Texts (1-3).
CHIN 801 Directed Readings and Research in Chinese (1-4). Advanced language training for the study of Chinese sources in the humanities or social science field of the student. Prerequisite: Consent of instructor. RSH

CHIN 880 Advanced Chinese Research Materials (2). A detailed examination of various Chinese language reference works and research materials. Emphasis will be placed on the use of different types of reference works to carry out research strategies. Prerequisite: CHIN 504 or equivalent and CHIN 580. LEC

East Asian Languages and Cultures Courses

EALC 508 Religion in China (3). NW
EALC 509 Religion in Japan (3). NW
EALC 510 Education in Japan (3). NW
EALC 520 Entrepreneurship in East Asia (3). NW
EALC 527 Asian Theatre and Film (3). NW
EALC 530 Chinese Culture (3). NW
EALC 536 Cultural Traditions of Japan (3). NW
EALC 563 Cultural History of Korea (3).
EALC 565 Popular Images in Japanese Culture, Literatures, and Films (3). NW
EALC 567 Japanese Ghosts and Demons (3). NW
EALC 570 The Structure of Japanese (3).
EALC 572 The Structure of Chinese (3).
EALC 575 Love, Sexuality, and Gender in Japanese Literature (3).
EALC 580 Popular Cultures of East Asia (3). NW
EALC 583 Imperial China (3). NW
EALC 584 Modern China (3). NW
EALC 585 Reform in Contemporary China (3). NW
EALC 587 Early Modern Japan (3). NW
EALC 588 Japan, 1853-1945 (3). NW
EALC 589 Japan Since 1945 (3). NW
EALC 590 Topics in East Asian Language and Cultures: ________ (1-9).
EALC 591 Topics in East Asian Languages and Cultures: ________ (1-9).
EALC 593 Modern Korea (3). NW
EALC 594 Law and Society in Traditional China (3).
EALC 596 Defining Japan: Marginalized Groups and the Construction of National Identity (3).
EALC 597 Japanese Theatre History (3). NW
EALC 598 History and Structure of the Japanese Language (3).
EALC 600 Biography of a City: ________ (3).
EALC 612 Visual and Literary Culture in Modern Japan (3).
EALC 615 Ancient China (3).
EALC 618 Sexual Politics in Dynastic China (3). NW
EALC 620 Daily Life in China from the Opium War to the Present (3). NW
EALC 636 Women in Japanese Literature (3).
EALC 642 Chinese Thought (3).
EALC 646 Chinese Law (3).
EALC 649 Doing Business With China: Law and Policy (3). NW
EALC 656 Government and Politics of East Asia (3). NW
EALC 666 Political Economy of East Asia (3).
EALC 676 International Relations of Asia (3).
EALC 678 Chinese Foreign Policy (3).
EALC 700 Introduction to East Asian Studies (1). Required of all M.A. students in the Department regardless of concentration. Introduction to resources in East Asian languages and literature. LEC
EALC 712 Readings in Traditional Japanese Literature (3). A survey of Japanese literature from earliest times to 1868. Students will study the major writers in each genre, with special emphasis on an individual research topic. A knowledge of Japanese is not required. (Not open to students with credit in EALC 312.) LEC
EALC 714 Readings in Traditional Chinese Literature (3). A general survey of representative literary works of major genres in traditional China. Lectures, assigned readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 314.) LEC
EALC 716 Readings in Modern Japanese Literature (3). A survey in English of contemporary Japanese literature. Students will become familiar with the various authors, schools, and genres. An individual research project will be carried out in an area of the student’s special interest. (Not open to students with credit in EALC 316.) LEC
EALC 718 Readings in Modern Chinese Literature (2-3). A general survey of the important writers of the 20th century and their works. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 318.) LEC
EALC 732 Seminar in Eastern Religious Thought: ________ (3). Analysis of the religious thought of selected thinkers of India, China, and / or Japan, traditional and modern. May be taken more than once if subject matter varies sufficiently. (Same as REL 762.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC
EALC 733 Seminar in Eastern Religious Texts: ________ (3). Analysis of a selected religious text or texts from India, China, or Japan, in translation. May be taken more than once if subject matter varies sufficiently. (Same as REL 733.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC
EALC 747 Teaching About East Asia (2). An advanced survey of the history, culture, and contemporary affairs of China, Japan, and Korea, specifically designed for K-12 educators who wish to incorporate East Asian topics into their classroom teaching. Pedagogical methods and resources for the study of East Asia will be emphasized. Topics covered will address relevant benchmarks in the state curricular standards in social studies, themes from the Advanced Placement World History examination, and the national standards in world history. (Same as HIST 747.) Prerequisite: Approval of the instructor. LEC

EALC 762 Readings in Japanese Religion (3). A high-level introduction to the traditional religions of Japan, with special emphasis on Japanese Buddhism. Texts to be used will include translations of original documents as well as secondary studies. Those students who have competence in Japanese will be required to do some readings in that language, but a knowledge of the language is not a prerequisite. LEC

EALC 776 Japanese People: Their Culture and Literature (3). A study of Japanese people's life cycle through a combination of theoretical social scientific observations of Japanese as a cultural group and personal literary descriptions of them. An individual research paper is required. (Not open to students with credit in EALC 366.) LEC

EALC 777 Seminar in Religion and Society in Asia: (1-3). Analysis of selected Asian religions and their relationships to selected Asian societies. May be taken more than once if subject matter varies sufficiently. (Same as REL 776.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 790 Topics in East Asian Languages and Cultures: _____ (1-3). Special topical courses covering a number of disciplines. Credit descriptions and prerequisites will vary. NOTE: May be repeated for up to 12 total credits. RSH

EALC 801 Directed Readings (1-5). Designed to meet the needs of advanced students whose study in East Asian studies cannot be met with regular courses. Prerequisite: Consent of instructor. RSH

EALC 899 Thesis (1-6). An inquiry into the source material upon a specific subject. THE

Japanese Courses

JPN 504 Advanced Modern Japanese I (3).

JPN 508 Advanced Modern Japanese II (3).

JPN 509 Business Japanese (3).

JPN 542 Introduction to Classical Japanese I (3).

JPN 544 Introduction to Classical Japanese II (3).

JPN 562 Modern Japanese Texts I (3).

JPN 564 Modern Japanese Texts II (3).

JPN 569 Advanced Business Japanese (3).

JPN 598 Readings in: _____ (1-3).

JPN 690 Seminar in: _____ (1-3).

JPN 801 Directed Readings and Research in Japanese (1-4). Advanced language training for the study of Japanese sources in the humanities or social science field of the student. Prerequisite: JPN 564 or consent of instructor. RSH

JPN 880 Advanced Japanese Research Materials (2). A detailed examination of various Japanese language reference works and research materials. Emphasis will be placed on the use of different types of reference works to carry out research strategies. Prerequisite: JPN 508 or equivalent and JPN 580. LEC

Korean Courses

KOR 504 Advanced Modern Korean I (3).

KOR 508 Advanced Modern Korean II (3).

KOR 562 Modern Korean Texts (3).

Ecoology and Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.

Economics

Chair: Joseph Sicilian
Director of Graduate Studies: Shu Wu
Snow Hall, 1460 Jayhawk Blvd., Room 415
Lawrence, KS 66045-7514, www.economics.ku.edu, (785) 864-3501
Professors: Barnett, Cornet, Earnhart, El-Hodiri, Ginther, Iwata, Rosenbloom

The Center for East Asian Studies is a National Resource Center funded by the U.S. government for the study of East Asia.

KU’s Institute for Policy and Social Research brings together social scientists from such disciplines as economics, education, environmental studies, geography, political science, public administration, social welfare, sociology, and urban planning.

Admission

Applicants to the M.A. and M.A./J.D. programs should have a minimum of two courses in calculus (6 to 10 semester hours) and a statistics course. Students with little background in economics may be advised to take ECON 520 Microeconomics and/or ECON 522 Macroeconomics as preparation for M.A. courses. Neither ECON 520 nor ECON 522 count toward completion of M.A. degree requirements. Applicants to the Ph.D. program should have three courses in calculus (12 to 15 semester hours) and a course in linear algebra.

Applications submitted before May 1 receive first consideration for fall or summer admission. Applications submitted before November 1 receive first consideration for spring admission.

Submit your application online at www.graduates.ku.edu.

Send all other requested application materials to

The University of Kansas
Department of Economics, Graduate Secretary
Snow Hall, 1460 Jayhawk Blvd., Room 415
Lawrence, KS 66045-7514

Test of English as a Foreign Language or International English Language Testing System Scores. Students whose native language is not English usually have difficulty in the program unless their English is excellent. The university requires a score of at least 520 on the individual paper-based TOEFL or 23 on the computer-based TOEFL with a minimum part score no less than 53 paper-based or 20 computer-based. We also accept IELTS with minimum band scores of 5.5 with no score below 5.0.

M.A. Degree Requirements

The Master of Arts degree program serves students with little previous background in economics as well as students who majored in economics as undergraduates. The program provides maximum flexibility for students to pursue their own special interests.

Candidates for the M.A. degree must complete a minimum of 30 semester hours of graduate work, consisting of 9 hours of required core classes, including ECON 700, ECON 701, ECON 715. At least 18 hours, inclusive of the required core courses, must be in economics; but students may take up to 12 hours in related areas, such as business administration, computer science, political science, or mathematics. No more than 9 hours may be taken at the 500 and 600 levels. At initial enrollment, each candidate must discuss a preliminary plan of study with his or her graduate advisor. This plan may be revised over time.

Thesis and Nonthesis Options. Candidates may pursue either a thesis or a nonthesis track. Students electing the thesis track must complete 24 hours of formal course work and 6 hours of thesis
under the direction of a thesis supervisor. This work is to be devoted to the completion of a satisfactory thesis. An oral examination is held on completion of the thesis. Students electing the nonthesis track must complete 30 hours of formal course work.

**Written Comprehensive Examination.** All candidates for the M.A. degree, including students enrolled in the M.A./J.D. program, must demonstrate proficiency in the application of economic theory through a written examination taken during the last semester of enrollment.

**M.A./J.D. Degree Program**

In this program a student can obtain both the Juris Doctor and the Master of Arts in economics in three years and one summer session. The requirements for the combined degree are as follows:

1. Admission to the M.A./J.D. degree program must be approved by the School of Law, the Department of Economics, and the College of Liberal Arts and Sciences.
2. The program requires 100 credit hours of course work, of which 82 hours must be completed in the law school and 18 hours in the Department of Economics. The department gives credit toward the M.A. degree for 12 hours of pertinent work in the law school, and the law school counts 8 credit hours in economics toward the J.D. degree. The 8 hours of economics courses that count toward the J.D. degree can be chosen from certain courses numbered 500-799 and from all 800-900 level courses. Prerequisites continue to apply, as does the requirement that all courses numbered 500-799 and from all 800-900 level courses.
3. The M.A./J.D. degree is a nonthesis degree in economics. A written comprehensive examination is required of all candidates for the M.A./J.D. degree.

**Ph.D. Degree Requirements**

**Course Requirements.** In addition to meeting general requirements, the Ph.D. candidate in economics must complete a minimum of 54 credit hours of course work, at least 48 of which must be in economics.

1. All Ph.D. candidates must complete these core courses in economic theory and quantitative methods:
   - ECON 800 Optimization Techniques I
   - ECON 801 Microeconomics I
   - ECON 802 Microeconomics II
   - ECON 809 Optimization Techniques II
   - ECON 810 Macroeconomics I
   - ECON 811 Macroeconomics II
   - ECON 817 Econometrics I
   - ECON 818 Econometrics II
   - MATH 727 Probability Theory
   - MATH 728 Statistical Theory
2. Course work beyond these required core courses is a matter of choice for the student in consultation with his or her graduate adviser. The graduate adviser develops a program to assist the student in specialized interests. Each program must include a sufficiently broad range of topics in economics to prepare the student for comprehensive examinations.

**Qualifying Examinations.** Ph.D. degree aspirants must pass written qualifying examinations in microeconomics and macroeconomics after completion of the core courses in these areas, ordinarily at the beginning of the fourth semester of full-time study. A student who does not pass a qualifying examination may be permitted one retake, ordinarily at the end of the fourth semester of full-time study.

**Fields of Specialization.** Each student must demonstrate competence in at least two fields of specialization in economics by completing two courses in each of these areas. Current fields of specialization include financial economics, economic development, industrial organization, international economics, labor economics, econometrics, economic history, economic theory, and macroeconomics.

**Third-Year Paper.** Each student must complete a third-year seminar paper. This would typically be in one of the fields of specialization. Usually the third-year paper becomes part of the student’s doctoral dissertation.

**Comprehensive Oral Examination.** Upon completion of most of the course work and other requirements for the doctoral degree, inclusive of research skills and residence requirements, the student must prepare a dissertation proposal under the direction of a thesis adviser and pass a comprehensive oral examination related to the dissertation proposal.

**Dissertation.** Following the comprehensive oral examinations, the candidate must organize and write a dissertation on his or her chosen topic under the supervision of a dissertation committee.

**Final Oral Examination.** The candidate must defend the dissertation successfully in a final oral examination.

**Financial Aid**

Financial aid may be awarded in the form of Oswald Fellowships, Graduate Teaching Assistantships, or Graduate Research Assistantships. First consideration for financial aid is given to applications received before February 1. To be considered for GTAs, international students must include a score from the Test of Spoken English (TSE) or a TOEFL-iBT examination that includes a speech component.

**Facilities and Services**

In addition to KU computing and library facilities, students in the M.A. and Ph.D. programs may use the department’s computer laboratory, which provides access to a variety of databases and econometric software packages useful for economics research.

**Economics Courses**

- ECON 505 History of Economic Analysis (3).
- ECON 510 Energy Economics (3).
- ECON 515 Income Distribution and Inequality (3).
- ECON 516 Income Distribution and Inequality, Honors (3).
- ECON 520 Microeconomics (3).
- ECON 521 Microeconomics, Honors (3).
- ECON 522 Macroeconomics (3).
- ECON 523 Macroeconomics, Honors (3).
- ECON 526 Introduction to Econometrics (3).

KU libraries contain more than 4.3 million volumes and more than 45,000 current periodicals in paper and electronic format. Library users have access to an online catalog of most library holdings. Visit www.lib.ku.edu.

Some departments do not offer all courses in any one semester. See the online Schedule of Classes at www.registrar.ku.edu for current course offerings.
ECON 530 American Economic Development (3).
ECON 535 Economic History of Europe (3).
ECON 536 Economic History of the European Union (3).
ECON 540 Recent American Economic History (3).
ECON 550 Environmental Economics (3).
ECON 560 Economic Systems (3).
ECON 562 The Russian Economy (3).
ECON 563 Current Economic Issues of East Europe (3).
ECON 564 Topics in Applied Economics: ... (3).
ECON 582 Economic Development (3).
ECON 583 Economic Issues of East Asia (3).
ECON 584 Economic Development of Latin America (3).
ECON 586 Economic Issues in China (3).
ECON 587 Economic Development of Africa (3).
ECON 590 Game Theory (3).
ECON 600 Money and Banking (3).
ECON 604 International Trade (3).
ECON 605 International Finance (3).
ECON 609 Sports Economics (3).
ECON 610 Resource Economics and Environmental Policy (3).
ECON 620 Elements of Mathematical Economics (3).
ECON 622 Public Finance (3).
ECON 630 Industrial Organization and Antitrust Policy (3).
ECON 631 Economics of Regulation (3).
ECON 635 Science and Technology in Economic Growth (3).
ECON 640 Labor Economics (3).
ECON 675 Introduction to Welfare Economics (3).
ECON 680 Economic Growth (3).
ECON 700 Survey of Microeconomics (3). A comprehensive survey of microeconomics, including the theories of consumption, production, distribution, pricing, and resource allocation. Prerequisite: ECON 520 and MATH 116 or MATH 121, and completion of ECON 142 and ECON 144, ECON 520, and ECON 522 with a grade-point average of at least 3.0 or graduate standing. LEC
ECON 701 Survey of Macroeconomics (3). A comprehensive survey of the modern theory of national income determination with particular emphasis on the foundation of modern econometric models and their empirical implementation. Prerequisite: ECON 522 and MATH 116 or MATH 121. LEC
ECON 705 Development of Economic Thought (3). The development of economic thought from the time of the physiocrats through the modern period. Consideration is given to the works of the English Classical school, the school of Vienna, the historical school, the Lausanne school, and Cambridge school. In addition, the development of economic thought in the United States during the period is treated. Prerequisite: ECON 520 or ECON 522. LEC
ECON 715 Elementary Econometrics (3). An elementary analysis of the problems of estimation, prediction, and hypothesis testing in the context of general linear, stochastic difference equation and simultaneous equations models. Applications of econometric theory to practical economic problems will be emphasized. Prerequisite: DSCI 301 or consent of instructor, MATH 116 or MATH 121; and completion of ECON 142 and ECON 144, ECON 520, and ECON 522 with a grade-point average of at least 3.00 or graduate standing. LEC
ECON 716 Econometric Forecasting (3). An analysis of econometric forecasting techniques, including time-series models, single-equation regression models, and multiple-equation regression models. The course will examine forecasts of (a) macroeconomic variables, such as interest rates, investment, GNP and the rate of inflation; and (b) market variables, such as price and quantity. Prerequisite: ECON 715 or ECON 817. LEC
ECON 730 Topics in Industrial Organization (3). Advanced study of recent research in applied microeconomics and business behavior. Topics include vertical integration, collusion, multi-plant and multi-product operations, regulated industries, tying arrangements, and the empirical links between monopoly power and profitability. Prerequisite: ECON 630 or equivalent. LEC
ECON 735 Science and Technology in Economic Growth (3). An analytical and historical exploration of the roles that science and technology have played in the economic growth of industrial societies. Topics covered include factors influencing the pace and character of technological innovation, national systems of innovation, the diffusion of new technologies, measurement of the benefits of new technologies, and the role of technology in various growth theories. Prerequisite: ECON 520, or ECON 524, or consent of instructor. LEC
ECON 740 Theory of Economic Growth and Development (3). Advanced study of the theory of economic growth and development. Recent growth models, theory of underdevelopment, programming, policies and plans for development. Prerequisite: ECON 520 and ECON 522, LEC
ECON 741 Economic Planning (3). A study of the techniques employed in the preparation of a national economic plan and of the policies required for its implementation. Special attention is given to the purposes of a plan, development strategies, investment requirements, and project appraisal. The development plans of several countries are examined to illustrate problems of planning economic development. Prerequisite: ECON 520 and ECON 522. LEC
ECON 750 The Theory of International Finance (2-3). This course examines the modern financial asset market approach to exchange rate determination as well as dynamic exchange rate models. Possible topics may include exchange rate overshooting, exchange rate crises, and international policy coordination. Prerequisite: ECON 605 and MATH 116. LEC
ECON 756 Economic History (3). The development of market economies and economic institutions. The course will focus on Europe, but will include comparisons with other developed nations. Topics include: long-run economic growth, the rise of capitalist agriculture and industry, the causes and consequences of technological change; changes in income distribution and economic organization; and the social and cultural effects of economic change. Prerequisite: ECON 520, ECON 522, and ECON 535 or ECON 530, or consent of instructor. LEC
ECON 757 Financial Economics (3). An introduction to the economic analysis of capital markets and the asset pricing theory. Topics include: random walk of theoretical and empirical results, market efficiency, capital asset pricing model; stochastic dominance; portfolio frontiers; mutual fund separation theorems; arbitrage pricing theory; valuation and hedging of derivative securities. Prerequisite: ECON 520, or ECON 522 and consent of instructor. LEC
ECON 765 Advanced American Economic Development (3). A study of the process of economic growth as it has occurred in the American economy, with emphasis on 19th century developments. The structural changes that accompanied growth and the impact of technological change are among the major topics considered. Prerequisite: ECON 520, or ECON 522 or ECON 530, or consent of instructor. LEC
ECON 769 Financial Economics (3). An introduction to the economic analysis of capital markets and the asset pricing theory. Topics include: random walk of theoretical and empirical results, market efficiency, capital asset pricing model; stochastic dominance; portfolio frontiers; mutual fund separation theorems; arbitrage pricing theory; valuation and hedging of derivative securities. Prerequisite: ECON 520, or ECON 522 and consent of instructor. LEC
ECON 770 Economics of the Labor Market (3). A theoretical and empirical analysis of labor supply and demand, human capital, information and labor mobility, unemployment, discrimination, and union behavior and influence. Prerequisite: ECON 520, or MATH 121 or MATH 115 and MATH 116. LEC
ECON 800 Optimization Techniques I (3). Economic models involving the maximization of an integral (a vector of integrals) subject to differential equality, integral equality (inequality), and finite equality (inequality) constraints. Characterization of optimal points by way of first and second order derivatives and by way of saddle points. Duality theorems of mathematical programming. Prerequisite: Consent of instructor. LEC
ECON 801 Microeconomics I (3). An advanced course in price and distribution theory. Prerequisite: ECON 800 or consent of instructor. LEC
ECON 802 Microeconomics II (3). The study of the operation of the economic system taking into account the diversity of goods and services. Primary attention is centered upon economic structure and the changing economic relationships between nations. Prerequisite: ECON 520 or ECON 522. LEC
ECON 806 Industrial Organization and Antitrust Policy (3). An intensive study of the general linear model and its economic effects. Prerequisite: ECON 520 and ECON 522; ECON 622 recommended. LEC
ECON 808 Optimization Techniques II (3). Economic models involving the maximization of an integral (a vector of integrals) subject to differential equality, integral equality (inequality), and finite equality (inequality) constraints. Characterization of optimal points by way of first and second order derivatives and by way of saddle points. Duality theorems of mathematical programming. Prerequisite: Consent of instructor. LEC
ECON 810 Macroeconomics I (3). A survey of basic macroeconomic models, including the classical and Keynesian as more recent ones. Topics also cover growth models and multi-period models will be discussed. Students should have some background in elementary linear algebra, calculus, and probability theory. Prerequisite: DSCI 301 and ECON 700 or equivalent. LEC
ECON 817 Econometrics II (3). An introduction to the economic analysis of capital markets and the asset pricing theory. Topics include: random walk of theoretical and empirical results, market efficiency, capital asset pricing model; stochastic dominance; portfolio frontiers; mutual fund separation theorems; arbitrage pricing theory; valuation and hedging of derivative securities. Prerequisite: ECON 520, or ECON 522 and consent of instructor. LEC
ECON 820 Applied General Equilibrium (3). A study of numerical applications of Walrasian general equilibrium theory to problems in public finance, international trade, and macroeconomics. The Arrow-Debreu model will be reviewed with em-
phasis on the use of Kakutani’s fixed point theorem to prove existence of equilib-}
rium. Fixed point theorems are used to solve the general equilibrium model studied. The Shoven-Whalley method for introducing taxes into the general equilib-
rium model will be discussed and extended to open economy models with tariffs and quota policies. Budget constraint functions will be studied. Financial assets will be introduced in perfect foresight models. Prerequisite: ECON 801. LEC

**ECON 825 Tutorial (0).** This course is designed to provide extra assistance for
graduate students in economics. RSH

**ECON 830 Game Theory and Industrial Organization (3).** A comprehensive introduction
to game theory and the theory of industrial organization. Basic game theoretic equilib-
rium concepts will be discussed in the context of static games, games of incomplete in-
formation, and dynamic games. These concepts will be applied to the theory of indus-
trial organization. Topics may include mechanism design, market failure, monopoly,
imperfect information and imperfectly competitive markets, limit pricing, predatory pricing, innovation and technical change, advertising and signaling theory, collusion and coordination, regula-
tion under incomplete information, agency and auditing problems, incentives in hier-
archies, job market signaling, insurance markets, nonlinear pricing and monopoly, and
cartel and long term relations. Prerequisite: ECON 801 and 802. RSH

**ECON 831 Economics of Regulation (3).** This course provides an analytical intro-
duction to the study of the economic rationale for and effects of government regu-
lation of industries. Emphasis will be placed on public utility regulation. Prerequisite:
ECON 700. LEC

**ECON 835 Comparative Economic Systems (3).** Comparative studies of the organ-
ization, operation, and performance of economic systems. Theoretical issues in-
volving the comparison of different economic systems will be covered. Theoretical characteristics of the economic systems such as capitalistic economics, socialist economies, and centrally planned economies, will be developed. Case studies of economic institutions and economic performance in various countries will be explored. Prerequisite: ECON 700. LEC

**ECON 840 Microeconomic Issues in Development Economics (3).** This course will
examine the process and policies of economic development from a microeconomic perspective. Selected topics may include the use of input-output matrices in de-
velopment planning; price controls and corrections for their allocative distortions; international trade policies; transformations from planned to market economies; labor markets and labor mobility; and capital markets and capital mobility. LEC

**ECON 842 Theory of Economic Planning (3).** Formal construction of the founda-
tions of economic planning with emphasis on concise discussion of the logic be-
hind the techniques utilized in economic planning. Topics that will be studied in-
clude: social welfare, short-term planning, price guided planning procedures, non-price guided planning procedures, long-term planning objectives, and charac-
teristics of optimal plan schedules. Prerequisite: ECON 701. LEC

**ECON 844 Macroeconomic Issues in Development Economics (3).** This course will
examine the process and policies of economic development from a macroeco-
nomic perspective. Topics will include the theory of growth in the dual economy, the
role of foreign trade in economic development, inflation and stabilization in develop-
ing economies, the problem of foreign debt, the relationship between fi-
nancial and real development, and various development policies. Prerequisite:
ECON 810 or consent of instructor. LEC

**ECON 850 The Advanced Theory of International Finance (3).** This is an advanced
course in international finance. Topics may include optimizing, equilibrium mod-
els of international asset pricing, international policy coordination, and properties of international asset pricing models. Prerequisite: ECON 801. LEC

**ECON 851 The Theory of International Trade (3).** The study of the pure theory of
international trade; factor-price equalization, trade and welfare, general equilib-
rium in the international economy, comparative statics, and stability conditions. Prerequisite: ECON 801. LEC

**ECON 855 Natural Resources (3).** Advanced analysis of the economic relation-
ships between natural resources, population, and environment. Emphasis is on the
analytical techniques useful for solving the economic problems of natural re-
source allocation over time. Prerequisite: ECON 700. LEC

**ECON 860 Advanced Public Finance (3).** A rigorous treatment of the economics of
the public sector. Emphasis will be placed on government expenditure and taxa-
tion. Possible topics include tax incidence, optimal taxation, dynamic analysis of fiscal policy, public goods, and cost benefit analysis. Prerequisite: ECON 801 or permission of instructor. LEC

**ECON 866 Selected Problems in American Economic History (3).** A study of selected aspects of American economic history with particular emphasis upon the testing of hypotheses that have been advanced to explain the growth and de-
velopment of the American economy. Prerequisite: ECON 766. LEC

**ECON 869 Advanced Financial Economics (3).** This course presents an analysis of
financial markets and instruments, together with the quantitative tools essential for
research in the field. The material will be presented in a discrete time setting and will stress analysis of portfolio equilibrium and the microstructure of financial equilib-
rium. Topics will include securities pricing in the absence of arbitrage, the theory of risk and utility in the basic portfolio problem, mean variance analysis and the CAPM, the Martin-
gate properties of security prices, restricted participation, asymmetric information, and recent developments. Prerequisite: ECON 802, or consent of instructor. LEC

**ECON 880 Selected Topics in Economic Theory: _____ (1-3).** An advanced course in economic theory that will study selected topics in economic theory such as consum-
ter theory, linear economics, decision theory, stability of economic equilibrium, comparator statics. Prerequisite: Consent of instructor. LEC

**ECON 899 Master’s Thesis (1-10).** THE

**ECON 901 Advanced Economics Theory I (3).** Advanced study of current general equilib-
rium analysis, the mathematical tools involved in such analysis, and some applications to other branches of economic theory. Prerequisite: ECON 802 and ECON 810. LEC

**ECON 902 Advanced Economic Theory II (3).** A continuation of the advanced study
of general equilibrium analysis. Prerequisite: ECON 901. LEC

**ECON 910 Economic Theory Seminar-Workshop (1-3).** Seminar-workshop is de-
signed to study advanced research topics in the areas of microeconomic and macro-
economic theory, and also provide assistance in the preparation and development of
the dissertations of Ph.D. candidates in these areas of specialization. LEC

**ECON 911 Applied Macroeconomics (3).** An advanced exploration of the microeco-
nomic foundations of macroeconomics, neoclassical macroeconomics with and with-
out money, Keynesian and neo-Keynesian macroeconomics, and economic stabiliza-
tion, inflation, and unemployment. Prerequisite: ECON 802 and ECON 810. LEC

**ECON 912 Advanced Macroeconomics (3).** An analysis of economic policy in dynamic
economic models. The effects of various policies on the equilibrium, stability, and ad-
justment paths of the models will be considered. Both open and closed economies will
be analyzed. Prerequisite: ECON 810. MATH 320 is recommended. LEC

**ECON 913 Monetary Economics (3).** This course examines how money, monetary
policy, and monetary institutions influence the macroeconomy. Modern theories of
money demand are presented and critiqued. The function of commercial banks, non-
bank financial intermediaries, and central banks in the money supply process is ad-
dressed. Interrelationships between the tools, the instruments, the operating proce-
dures, the intermediate targets, and the goals of policy are examined. Additional top-
ics may include the monetary transmission mechanism, the effect of uncertainty on
optimal policy decisions, the rules versus discretion debate, the monetary implica-
tions of a financial crisis, the desire to hold money, and the role of international capital
flows in financial crises. Prerequisite: ECON 802 or consent of instructor. LEC

**ECON 915 Advanced Econometrics I (3).** The study of selected topics in applied cross-
section econometrics for uses mainly in applied microeconomics, public finance, and
labor economics. Topics include: regression diagnostics, parametric and nonpar-
tmetric models, latent variable models, panel data studies, probabalistic choice models, censored and
ttruncate models, sample selection, disequilibrium models, duration studies, and semi-
and nonparametric models. Prerequisite: ECON 818, or consent of instructor. LEC

**ECON 916 Advanced Econometrics II (3).** A study of selected topics in applied time-
series econometrics for uses mainly in applied macroeconomics, international finance, and
development economics. Topics include empirical applications of ARCH models, VAR
models (study of impulse response function and variance decomposition), unit-root
integration and long memory models. Bayesian unit root analysis, estimation and in-
fherence of dynamic general equilibrium models, model calibration and simulation are
also possible topics of this course. Prerequisite: ECON 818, or consent of instructor. LEC

**ECON 917 Advanced Econometrics III (3).** A study of structural and nonlinear time
series approaches to econometric modeling and inference. The course emphasizes

techniques needed to use economic theory in system-wide econometrics. Emphasis is
placed on selection of functional form for approximation to theoretical functions and
the use of duality theorems for derivation of the resulting econometric systems of
equation. Inference with those models will be by nonlinear parametric, semi-
parametric, and nonparametric methods. Prerequisite: ECON 818. LEC

**ECON 920 Econometrics Seminar-Workshop (1-3).** Seminar-workshop is de-
signated to study advanced research topics in the area of econometric theory and
application, and also provide assistance in the preparation and development of
the dissertations of Ph.D. candidates in this area of specialization. LEC

**ECON 925 Economic Dynamics (3).** A study of the concepts of equilibrium and
stability in various economic frameworks; static economics, changing economics, and
regulated and aggregated economies. Prerequisite: ECON 802, or consent of instructor. LEC

**ECON 930 Economic History Seminar-Workshop (1-3).** Seminar-workshop is de-
signed to study advanced research topics in the area of economic history, and
also provide assistance in the preparation and development of the dissertations of
Ph.D. candidates in this area of specialization. LEC

**ECON 940 Economics Seminar-Workshop in: _____ (1-3).** This seminar-workshop is
designed to study advanced research topics in the area of economic history, and
also provide assistance in the preparation and development of the dissertations of
Ph.D. candidates in this area of specialization. LEC

**ECON 955 Advanced Topics in Natural Resources (3).** Rigorous analysis of an
Arrow-Debreu economy with natural resources and extensions (including optimal
growth, planning procedures, and uncertainty). Investigation of current research
topics in theoretical and applied resource economics. Required course for Ph.D.
candidates writing dissertations in natural resources. Prerequisite: Consent of in-
structor. ECON 927 recommended. RSH

**ECON 970 Advanced Labor Economics (3).** A survey of recent labor economics re-
search. Topics include labor supply and demand, human capital investment, and
unemployment. Prerequisite: ECON 770. LEC

**ECON 999 Doctoral Dissertation (1-10).** THE
English

Chair: Marta Caminero-Santangelo,camsan@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3001
Lawrence, KS 66045-7594, www.english.ku.edu, (785) 864-4520

Associate Chair: Anna Neill, aneill@ku.edu,
3001H Wescoe Hall, (785) 864-4520

Director of Graduate Studies: Joseph Harrington,
harrington@ku.edu, 3001C Wescoe Hall, (785) 864-2522

Professors: Atkins, Bergeron, Carothers, Chermiss, Devitt, Fowler, Graham, Hardin, S. Harris, Hartman, Hemenway, Johnson, Landsberg, Lim, Scott

Professors Emeriti: Boyd, Cobb, Contoski, Drayton, Gold, Gridley, Gunn, Habegger, Levine, Masinton, Orel, Quinn, Schultz, Springer, Sutton, Worth


Associate Professors Emeriti: Arnold, Cook, Lichter, Oruch

Assistant Professors: Fitzgerald, Grund, Mielke, Moriarity, Rowland, Schieberle

Assistant Professors Emeriti: Cohn, Warders

The department offers a full graduate program, leading to the M.A. (three options), M.F.A., and Ph.D. degrees.

Admission

To be admitted, a student must have a strong undergraduate record, particularly in the humanities. A grade-point average of at least 3.3 on a 4.0 scale normally is required. College courses should include at least 18 hours of junior/senior work in literature, and the student is encouraged to have a reading knowledge of an appropriate foreign language. Applicants are expected to have some familiarity with British and American literary history and the work of the major writers in English. More important than factual knowledge, however, is the ability to read significant texts sensitively and intelligently and to write good English prose. Candidates for admission must submit Graduate Record Examination scores in support of their applications.

Submit your application online at www.graduate.ku.edu. Send one transcript and all other requested application materials to:
The University of Kansas
Department of English
Wescoe Hall, 1445 Jayhawk Blvd., Room 3001
Lawrence, KS 66045-7594

M.A. Degree Requirements

While continuously enrolled, a student has a total of five years to complete the master’s degree. The candidate’s program should be arranged in consultation with the director of graduate studies or a member of the departmental committee on graduate studies.

Students who elect to write a master’s thesis must enroll in ENGL 899. M.A. candidates in Options Ia, Ib, and II must take at least 15 hours of their course work, in addition to ENGL 800, at the 700, 800, and 900 levels.

Option Ia—Literature. Requirements include

• One graduate course in English language/literature in Old and Middle English, and one in English literature 1500-1800

• One graduate course in each of the following: English literature post 1800, American literature, composition/rhetoric/literary theory

• Introduction to literary studies (taken at the first opportunity)

• A total of 30 hours in English courses carrying graduate credit. At least 15 of these, in addition to introduction to literary studies, must be at the 700 level or above and must include at least one seminar passed with a grade of A or B.

Students electing the M.A. examination take the final oral examination. For students electing the M.A. thesis, the thesis defense constitutes the final oral examination. Students may enroll in ENGL 899 (thesis/examination hours) as necessary, but ENGL 899 does not count toward the 30-hour course requirement.

Option Ib—Literature and Literary Theory. Requirements include

• One graduate course in English language/literature in Old and Middle English, or one in English literature 1500-1800

• One graduate course in English literature post 1800, or in American literature

• Two graduate courses in literary theory

• Introduction to literary studies (taken at the first opportunity)

• A total of 30 hours in English courses carrying graduate credit. At least 15 of these, in addition to introduction to literary studies, must be at the 700 level or above and must include at least one seminar passed with a grade of A or B.

Students electing the M.A. examination take the final oral examination. For students electing the M.A. thesis, the thesis defense constitutes the final oral examination. Students may enroll in ENGL 899 (thesis/examination hours) as necessary, but ENGL 899 does not count toward the 30-hour course requirement.

Option II—Language, Literature, and Composition. Requirements include

• Courses in literature: At least 6 hours, including at least 3 hours in English literature post 1800 or American literature

• Courses in language and composition: At least 6 hours in English language and/or in composition/rhetoric courses

• Introduction to literary studies

• A total of 30 hours in English courses carrying graduate credit. At least 15 of these, in addition to introduction to literary studies, must be at the 700 level or above and must include at least one seminar passed with a grade of A or B.

Students electing the M.A. examination take the final oral examination. For students electing the M.A. thesis, the thesis defense constitutes the final oral examination. Students may enroll in ENGL 899 (thesis/examination hours) as necessary, but ENGL 899 does not count toward the 30-hour course requirement.

No matter the option chosen, the student also must demonstrate reading knowledge of one of the following foreign languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, Old English, or Spanish. In each option, a final

The KU English department sponsors a novelist-in-residence program. Contemporary poets read from their work and speak to classes at KU through the visiting artist program.

The English Alternative Theatre mounts full productions and staged readings of plays.

More than half of EAT’s productions feature work by KU student playwrights.

The Department of English offers an M.F.A. degree in creative writing.
oral examination is required—either an examination covering a list of required and selected texts or a thesis defense.

Master of Fine Arts Degree Requirements
Requirements include
• Four graduate courses (12 hours) in literature, English, or American
• Four graduate courses (12 hours) in creative writing
• Seven to 9 hours in electives or practica chosen from graduate courses in the Department of English, or approved courses in another department
• ENGL 899 M.A. / M.F.A. Thesis (15 hours). Original writing in prose fiction, poetry, drama, or nonfiction prose

Ph.D. Degree Requirements
Students entering the program with the B.A. have, while being continuously enrolled, eight years to complete the M.A. and Ph.D. combined. Students entering with the M.A. have five years to complete the Ph.D.

Requirements for the Degree of Doctor of Philosophy in English
1. Ph.D. candidates must earn 24 hours of credit in appropriate formal graduate courses beyond the M.A. At least 15 hours (in addition to introduction to literary studies if not taken for the M.A.) of this course work must be taken from among courses offered by the Department of English at KU beyond the M.A. Students with master’s degrees earned elsewhere may be required by the director of graduate studies, acting on behalf of the graduate committee, to take additional course work.
2. Required courses: Introduction to literary studies and two seminars offered by the Department of English at KU beyond the M.A. Students with master’s degrees earned elsewhere may be required by the director of graduate studies, acting on behalf of the graduate committee, to take additional course work.
3. A reading knowledge of two of the following languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, Old English, or Spanish, or demonstrated fluency in one of these.
4. A comprehensive examination, to be completed after satisfactory completion of formal course requirements. This examination, which has both written and oral components, consists of three areas of study.
5. In the semester following the comprehensive examination, a 90-minute dissertation proposal review, which is to provide formal direction for the dissertation.
6. At least one year of supervised quarter-time teaching for qualified candidates except for those who do not plan to undertake teaching careers or who have already had extensive teaching experience.

English Courses
ENGL 610 The Literature of England to 1500 (3).
ENGL 620 Renaissance English Literature: ______ (3).
ENGL 633 Milton (3).
ENGL 640 British Literature, 1600-1800: _____ (3).
ENGL 650 Romantic Literature: ______ (3).
ENGL 655 Victorian Literature: _____ (3).
ENGL 674 African Literature: ______ (3). NW
ENGL 690 Studies in: ______ (3).
ENGL 707 Literary Criticism to 1800 (3). An introduction to the major writings of literary criticism, in their historical context, from Plato and Aristotle to Samuel Johnson. LEC
ENGL 708 Literary Criticism After 1800 (3). An introduction to modern criticism, in its historical context, from Wordsworth and Coleridge to the present. The emphasis will be on major critics and predominant schools. LEC
ENGL 709 Critical Theory: Problems and Principles: ______ (3). Study of a topic (such as mimesis, influence, deconstruction) that is important in critical theory. May be repeated for credit as topic varies. LEC
ENGL 710 Introduction to Old English (3). A study of the grammatical features of the earliest form of written English, with readings in Old English prose and poetry. LEC
ENGL 712 Beowulf (3). Prerequisite: An introductory course in Old English. LEC
ENGL 714 Middle English Literature (3). Reading of selected works in Middle English (exclusive of the works of Chaucer). LEC
ENGL 720 Chaucer: _____ (3). Intensive study of either the Canterbury Tales or Troilus and Criseyde and the earlier poems. May be repeated for credit up to a maximum of six hours. LEC
ENGL 725 Shakespeare: _____ (3). Intensive study of selected plays. May be repeated for credit as the topic changes. LEC
ENGL 730 Topics in Early Modern Literature: _____ (3). Intensive study of texts written between 1455 and 1800. The course may be organized around a particular genre (poetry, prose, drama), historical period (e.g. Elizabethan literature), a major author (e.g. Milton), group of authors (e.g. women writers), or theme (e.g. literature and politics). Students will be expected to read and discuss widely. Students will write critical and theoretical essays as well as study primary texts. May be repeated for credit as topic varies. LEC
ENGL 750 British Literature of the 19th Century (3). Intensive study of British literary works of the 1800s. Topics may focus on a particular genre, theme, historical period or group of authors. May be repeated for credit as the topic changes. LEC
ENGL 752 Fiction Writing III (1-3). Practice in the writing of fiction under the direction of a member of the department working in conjunction with one or more writers in residence. Membership is limited to students who submit, well in advance of enrollment, manuscripts showing unusual ability. May be repeated for credit. LEC
ENGL 754 Poetry Writing III (1-3). Intensive poetry under the direction of a member of the department working in conjunction with one or more writers in residence. Membership is limited to students who submit, well in advance of enrollment, manuscripts showing unusual ability. May be repeated for credit. LEC
ENGL 755 Writers Workshop (1-3). An intensive course in writing prose fiction and/or poetry, designed for writers of fiction and/or poetry between the end of their M.A. and the beginning of their Ph.D. May be repeated for credit as the topic changes. LEC
ENGL 756 Forms: _____ (3). A study of literary works belonging to a particular genre or to multiple genres (fiction, nonfiction, poetry, drama etc.) either in a particular form (short story, essay, sonnet, etc.), concerned with a particular topic, or illustrative of a particular element of craft (voice, point of view, character development, etc.). Intended primarily for creative-writing students with an interest in developing their skills at reading as writers. May be repeated for credit as the topic varies. LEC
ENGL 756 Literary Criticism of the 20th Century: (3). Intensive study of British literary works written during the 20th century. Topics may focus on a particular genre, theme, historical period or group of authors. May be repeated for credit as the topic changes. LEC
ENGL 764 Modern Irish Literature: _____ (3). Intensive study of topics in modern Irish literature. Topics may focus on a particular genre, theme, historical period or group of authors. May be repeated for credit as the topic changes. LEC
ENGL 765 African American Literature: _____ (3). Study of the grammatical features of the earliest form of written African American English, with readings in African American literature. May be repeated for credit up to a maximum of six hours. LEC
ENGL 774 Topics in Literature of Africa and the African Diaspora: _____ (3). An intensive study of the literatures of Africa and/or African diaspora (people of African descent dispersed around the world). This study will focus on the major characteristics of a particular period, genre, mode, and/or school of literature such as African, Caribbean, Afro-Brazilian, African American, African Canadian, Black British. Critical theories pertinent to writers and their work will be covered. Topics may include studies in drama, poetry, or the novel; migration narratives; literature of the particular era, such as the Harlem Renaissance, Neocolonialism, or the Black Arts Movement; representations of gender, etc. As topics vary by semester, the course may be repeated for credit. Undergraduates with adequate preparation may enroll with permission from instructor. (Same as AAAS 774). LEC
ENGL 776 American Literature to 1900: _____ (3). Intensive study of North American literary works before 1900. Topics may focus on a particular genre, theme, historical period or group of authors. May be repeated for credit as the topic changes. LEC
ENGL 777 American Literature After 1900: _____ (3). Intensive study of North American literary works after 1900. Topics may focus on a particular genre, theme, historical period or group of authors. May be repeated for credit as the topic changes. LEC
ENGL 779 U.S. Poetries Since 1900 (3). A colloquium for graduate students, sampling the range of poems and poetries produced in the United States in the twentieth and twenty-first centuries. LEC
ENGL 800 Composition Studies (3). This course surveys the field of composition studies, examining major issues and theories in the study of writing. The course may include theories from classical to contemporary rhetoric, composition theory from the twentieth century, and the most current debates in the study of writing. LEC
ENGL 811 Criticism and the Teaching of Literature (3). A survey of selected critical theories and of the applicable principles to the teaching of literature. LEC
ENGL 857 History of the English Language (3). Historical study of the phonology, morphology, syntax, vocabulary, and semantics of English; the relation between linguistic and cultural change. LEC
ENGL 874 Modern English Grammar (3). A study of contemporary English: phonology, morphology, syntax, and usage. The emphasis is structural, but “tradi-
tional” grammar is referred to for contrast, example, and clarification. LEC
ENGL 870 Studies in: ______ (3). Examination of a significant topic in literature or the English language. May be repeated for credit as the topic varies. LEC
ENGL 800 Introduction to Graduate Study in English (3). Acquaintance with resources and practice in techniques that are essential to other graduate courses. Major concerns include the writing and documentation of scholarly papers; basic reference and bibliographical aids; critical approaches to literature and literary historiography; and the place of language and rhetoric in English studies today. LEC

ENGL 801 Study and Teaching of Writing (3). A survey of major concepts and issues in the study of writing, especially as applied to teaching composition. Practices in writing pedagogy are also discussed, and students’ teaching of composition is observed and explored. Required of and enrollment limited to new teachers of English 101. May not be repeated for credit toward graduate degree. FLD

ENGL 802 Practicum in the Teaching of College English (1). A course concerned primarily with the pedagogy of literature and writing about literature. Includes weekly group meetings, individual conferences, and class visits. Required of and enrollment limited to new teachers of English 102. May not be repeated for credit toward graduate degree. Course graded on a satisfactory/unsatisfactory basis. FLD

ENGL 803 Practicum in the Teaching of Creative Writing (1). A course for graduate teaching assistants pursuing the M.F.A. or Ph.D. with emphasis in Creative Writing. Normally taken in the third year. Concerns primarily the pedagogy of creative writing: workshop techniques, approaches to conferencing, revision strategies, and the like. Includes weekly group meetings as well as class visits and individual conferences. May not be repeated for credit toward graduate degree. Graded on a satisfactory/unsatisfactory basis. FLD

ENGL 880 Topics in Composition Studies and Rhetoric: (3). Examination of selected topics in composition and rhetoric, such as literary studies, genre theory, dialogism, or writing across the curriculum. May be repeated for credit as the topic changes. Prerequisite: ENGL 780 or equivalent. LEC

ENGL 885 Writing Center Theory and Administration (3). This course explores theories motivating writing center administration and practice. Students will investigate the multiple functions of writing centers, from writing labs associated with college composition instruction, to decentralized resources for writing faculty teaching writing across the disciplines, to elementary, secondary, and community support centers for writers, to online administrative perspective, design a research study and propose actions such as creating policy, developing curricula, designing materials, or conducting assessments. (Same as LA&S 700.) Prerequisite: LA&S 400, ENGL 400, or consent of instructor. LEC

ENGL 896 Internship (1-3). Practical experience under professional supervision in editing, theatrical production, and other activities relevant to the completion of an advanced degree in English. FLD

ENGL 897 Preparation for the M.A. Examination (1). An independent reading course for students preparing to take the M.A. examination and not otherwise enrolled in the semester of the examination. Does not count toward the residence requirement. Prerequisite: Consent of the Coordinator of Graduate Studies. RSH


ENGL 904 Seminar in Composition Theory: (3). Intensive study of one or more theoretical approaches to composition in English (e.g., rhetoric, text grammar, stylistics). Prerequisite: ENGL 800. LEC

ENGL 905 Seminar in the English Language: (3). Close study of the English language in a particular period. Prerequisite: ENGL 800. LEC

ENGL 908 Seminar in Literary Criticism: (3). Close study of one or more major critics, or a major critical school, or of a topic important in literary criticism. Prerequisite: ENGL 800. LEC

ENGL 915 Seminar in Medieval English Literature: (3). Study may center on either Old or Middle English language and literature. Prerequisite: ENGL 800. LEC

ENGL 916 Seminar in Chaucer: (3). Prerequisite: ENGL 800. LEC

ENGL 920 Seminar in Renaissance English Literature: (3). Close study of one or two major authors or of a group of related works. Prerequisite: ENGL 800. LEC

ENGL 926 Seminar in Shakespeare: (3). Prerequisite: ENGL 800. LEC

ENGL 932 Seminar in Milton: (3). Prerequisite: ENGL 800. LEC

ENGL 940 Seminar in Restoration and 18th-Century British Literature: (3). One or two authors are read closely, or a group of related works is studied. Prerequisite: ENGL 800. LEC

ENGL 950 Seminar in 19th-Century British Literature: (3). Concentrated study of one or two major figures, or a group of significant writers, or an aspect of the literary scene. Prerequisite: ENGL 800. LEC

ENGL 960 Seminar in 20th-Century British Literature: (3). Concentrated study of one or two authors, or a group of significant writers, or an aspect of the literary scene. Prerequisite: ENGL 800. LEC

ENGL 970 Seminar in American Literature: (3). Concentrated study of one or two authors or of historical periods or important movements. Prerequisite: ENGL 800. LEC

ENGL 974 Seminar in Literatures of Africa and the African Diaspora: (3). Advanced study in a topic related to literature, language, and cultures of Africa and the African Diaspora, such as a concentrated study of one or two authors, a group of significant writers, an historical period or important movement, or an aspect of the literary or cultural scene of Black writing. May be repeated for credit as the topic varies. LEC

ENGL 990 Seminar in: (3). Advanced study in a topic related to literature, language, theory, or a special skill such as analytical bibliography or editing. Prerequisite: ENGL 800. LEC

ENGL 997 Preparation for the Comprehensive Examination (1-12). An independent reading course for students preparing to take the Ph.D. comprehensive examination. May normally be taken in the semester or summer session immediately preceding the semester in which the comprehensive examination is taken. The grade in the course will be a P and will be changed to an A, B, C, D, or F grade by the comprehensive examining committee at the completion of the examination. Does not count toward the residence requirement. Prerequisite: Consent of the Coordinator of Graduate Studies. RSH

ENGL 998 Investigation and Conference: (1-6). Individual work in (a) language, (b) literature, (c) composition, or (d) the teaching of English, by properly qualified graduate students under the direction of appropriate members of the Graduate Faculty as assigned by the Graduate Director. Limited to 6 hours of credit toward the M.A. or Ph.D. degree; only on three-hour enrollment may substitute for a formal course in satisfying a field distribution requirement. Normally offered for only up to three credit hours in any one enrollment. Permission of the supervising faculty member and of the Graduate Director required for enrollment. RSH

ENGL 999 Doctoral Dissertation (1-12). THE

European Studies

No graduate program in European studies is offered. The following courses may be taken for graduate credit.

■ European Studies Courses

EURS 500 Seminar in European Studies (3).
EURS 501 Senior Thesis in European Studies (3).
EURS 502 Senior Honors Thesis in European Studies (3).
EURS 503 Europe Today (3).
EURS 505 Studies in Exile Literature (3).
EURS 506 Culture and Politics of the Cold War in Western Europe (3).
EURS 507 Research in European Collections (1-3).
EURS 508 Politics and Economics of Cultural Production in Western Europe (3).
EURS 509 Introduction to the Study of Southern European Societies (3).
EURS 510 Scandinavian Life and Civilization (3).
EURS 511 Topics in European Studies: (3).
EURS 512 Irish Literature and Culture: (3).
EURS 536 Economic History of the European Union (3).
EURS 550 Classics of Peace Literature (3). HL
EURS 556 The Literature of Human Rights (3).
EURS 580 Directed Study (1-3).
EURS 581 Discussion Section in French (1).
EURS 582 Discussion Section in German (1).
EURS 583 Discussion Section in Italian (1).
EURS 584 Discussion Section in Spanish (1).
EURS 604 The European Union (3).

Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.

The Department of French and Italian participates in graduate exchange programs with universities in Créteil, Besançon, Strasbourg, and Clermont-Ferrand.

French M.A. and Ph.D. programs allow students to deepen their understanding of French literary traditions and to explore the interrelationships of literature, theory, and other disciplines.
French Language and Literature

See French and Italian Studies in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

French and Italian

Chair: Van Kelly
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7594, www.frenchitalian.ku.edu, (785) 864-9062
Graduate Adviser: Caroline Jewers, 2068 Wescoe Hall, (785) 864-9076
Professors: Kozma, Pasco
Professors Emeriti: Dinneen, Johnson
Associate Professors: Booker, Fourny, Jewers, Kelly
Assistant Professors: Hall, Hayes, Sayeh, Scott, Swanson
The department offers a full graduate program leading to the M.A. and Ph.D. degrees with a major in French.

Admission

A minimum of 26 credit hours of French is required for admission, including college preparatory work, of which 8 hours must be advanced undergraduate course work in French literature. Results of the Graduate Record Examination general test are required for domestic applicants. Test of English as a Foreign Language or International English Language Testing System, and the Test of Spoken English are required for nondomestic applicants. If the Internet-based TOEFL is available in the student’s country, it is required (in lieu of paper-based TOEFL or IELTS, and the TSE). Please see www.international.ku.edu/~oip/students/mepr for minimum required scores for the TOEFL and IELTS. Nondomestic applicants who wish to be considered for GTA need to take the TSE and meet the required minimum.

Submit your application online at www.grad.ku.edu. Send all other requested application materials to

The University of Kansas
Department of French and Italian
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7594

M.A. Degree Requirements

1. Thirty credit hours, including
   • FREN 700 Old French
   • FREN 720 Introduction to Graduate Studies in French
   • FREN 610 Thème et Version or FREN 620 Expository French Writing
   • Two seminars of 3 hours each or a thesis (FREN 899, 6 hours)
   • FREN 704 Methods in French Language Instruction
2. A reading knowledge of Greek, Latin, German, or a second Romance language.
3. Comprehensive written and oral examinations.

Ph.D. Degree Requirements

Prerequisite. Completion of the M.A. degree at KU or a comparable institution. Applicants holding the M.A. in a discipline other than French may be required to take a qualifying examination.

Requirements. The following requirements are in addition to general requirements and those outlined above for the master’s degree in French.

1. Thirty hours beyond the M.A. (excluding dissertation hours).
2. FREN 810 Criticism and Critical Methods.
3. A knowledge of a non-Romance language and of a Romance language other than French. The language presented for the M.A. is accepted as one of these. For one language, the candidate must demonstrate proficiency equivalent to completion of a second-semester course or complete the final graduate reading course in that language. For the other language, the student must demonstrate proficiency equivalent to completion of a fourth-semester course.
4. A satisfactory command of written and spoken French and a reasonable familiarity with the history and civilization of France.
5. The completion of at least one year of half-time teaching in the department.
6. Such courses as the department may prescribe to ensure a broad grasp of the major field and the proper preparation for original research in the specific area of the dissertation. The comprehensive examinations in French are both written and oral.

Financial Aid

The department offers graduate teaching assistantships to students pursuing graduate degrees. In addition, graduate students are eligible to apply for graduate fellowships (see Fellowships and Scholarships in the Graduate Studies chapter of this catalog) and for KU Direct Exchange Scholarships to France. The department also offers a number of awards for excellence in academic work and teaching.

French Courses

FREN 500 Advanced French Phonetics (3).
FREN 530 Studies in Film: _____ (3).
FREN 592 French Culture Through Film I, Beginnings to 1950 (3).
FREN 593 French Culture Through Film II, 1950-Present (3).
FREN 600 Studies in: _____ (3).
FREN 610 Thème et Version (3).
FREN 620 Expository French Writing (3).
FREN 680 Language Teaching and Advanced Conversation (2-3).
FREN 681 Language Teaching for Oral Proficiency (1).
FREN 700 Old French (3). Introduction to grammar and structure through the reading of representative works. LEC
FREN 701 History of the French Language (3). Major aspects of development and growth. Conducted in English. LEC
FREN 702 Provencal (3). Introduction to grammar and structure of the language through a reading of representative works from the Troubadour period. LEC
FREN 703 Structure of Modern French (3). Linguistic analysis of the phonological, morphological, and syntactic structure of modern French. Description in terms of current theories and models. Application of linguistic analyses to the teaching of French. LEC
FREN 704 Methods in French Language Instruction (3). This course provides an overview of current and historical approaches to foreign language teaching, with reference to the instruction of French. Past and current trends and methodologies of language instruction are examined in order to acquaint students with various classroom approaches. Research findings in second language acquisition are explored and their implications discussed so as to show how these findings lead to more effective classroom practices. LEC
FREN 720 Introduction to Graduate Studies in French (3). An introduction to the skills required of students doing graduate degrees in French literature; areas covered are 1) introduction to literary theory and criticism, 2) bibliography and re-

Chimères, a journal of French and Italian literature, is published by KU graduate students.

Geography at KU has long been a leader in cartography, geographic information systems, and remote sensing.
search methods, and 3) training in preparation of critical essays and theses. Re-
quired of all M.A. candidates unless specifically released by department. LEC
FREN 730 Introduction to French Poetry (3). A detailed introduction to versifica-
tion, rhetoric, image and symbol as they apply to the study of poetry. Texts will be
chosen from one or more periods of French literature and will include poems in
verse and prose. Considerations and readings on the history of French poetry on
the composition of recituals, on poetic theory, and on the relation of poetry to other
genres and media may be incorporated. LEC
FREN 732 Francophone Studies (3). Selected movements, themes, genres, topics
in the cultures and/or literatures of the French-speaking world outside France.
May be repeated for credit. LEC
FREN 740 Medieval French Literature (3). Literary history of the period, with discus-
sion of representative works read for the most part in the original old French. LEC
FREN 750 French Literature of the 16th Century (3). A survey of the major writ-
ers, covering Rabelais, Scève, Louise Labé, Marguerite de Navarre, Ronsard, Du
Belley, Montaigne, and d’Aubigné. LEC
FREN 763 French Drama of the 17th Century (3). Development of baroque and
classical French drama, with emphasis on Corneille, Molière, and Racine. LEC
FREN 765 Nondramatic French Literature of the 17th Century (3). Esthetics of
baroque and classicism. Emphasis on Deschartes, Pascal, La Rochefoucauld, Mme
de Lafayette, although other authors may be studied. LEC
FREN 770 French Literature of the 18th Century (3). Special attention paid to
Montesquieu, Voltaire, Diderot, and Rousseau; also development of novel and
drama. LEC
FREN 782 French Novel of the 19th Century (3). Emphasis on major novelists of
the century: Balzac, Stendhal, Flaubert, and Zola. LEC
FREN 785 French Romantic Movement (3). Major Romantic writers viewed in
context of intellectual, esthetic, and social milieu of period 1800-1850. LEC
FREN 787 French Post-Romanticism (3). Literary movements developing out of
reaction to Romanticism: Realism, Naturalism, Symbolism, and Parnassian. LEC
FREN 790 Contemporary French Writers (3). Major 20th century authors, stressing
Proust, Gide, Giraudoux, Claudel, Sartre, and Camus. LEC
FREN 792 Proust (3). Principal movements, structures, and tensions of A la
recherche du temps perdu. LEC
FREN 799 Master’s Seminar (1). To meet Master’s degree requirement for contin-
ued enrollment. This course will be graded satisfactory/unsatisfactory. FLD
FREN 800 Studies in:____(3). Study of topics not limited to one century. May be
repeated for credit. LEC
FREN 810 Criticism and Critical Methods (3). Literary criticism from historical,
thematic, and practical point of view. LEC
FREN 812 Studies in the French Novel:____(3). Selected topics to be specified.
Study of form, movements, or themes in the French Novel, not limited to one
century. May be repeated for credit. LEC
FREN 814 Studies in the French Short Story:____(3). Selected topics to be specified.
Study of form and theory of the French short story, not limited to one century. LEC
FREN 842 Arthurian Literature in France (3). Origins and development of
Arthurian legend; analysis of major texts. Prerequisite: FREN 700. LEC
FREN 848 Studies in Medieval French Literature:____(3). Various movements,
themes, or genres. May be repeated for credit. Prerequisite: FREN 700. LEC
FREN 850 Early Renaissance Literature (3). Emphasis on Rabelais, Marguerite de
Navarre, Marot, Maurice Scève and Louise Labé. LEC
FREN 858 Studies in 16th Century French Literature:____(3). Various move-
ments, themes, or genres. May be repeated for credit. LEC
FREN 868 Studies in 17th Century French Literature:____(3). Various move-
ments, themes, or genres. May be repeated for credit. LEC
FREN 871 Literature of the Enlightenment in France (3). Philosophical thought
in 18th century as reflected in literature. Emphasis on philosophies, with discussion
of external influences. LEC
FREN 872 Novel of the 18th Century in France (3). Origins and development to
Revolution; thematic analysis with attention to critical attitudes and their influ-
ence upon evolution of novel as genre. LEC
FREN 878 Studies in 18th Century French Literature:____(3). Various move-
ments, themes, or genres. May be repeated for credit. LEC
FREN 887 Symbolist Movement in France (3). Works of major symbolist poets, in-
cluding Baudelaire, Verlaine, Rimbaud, Mallarmé, and Valéry. LEC
FREN 888 Studies in 19th-Century French Literature:____(3). Various move-
ments, themes, or genres. May be repeated for credit. LEC
FREN 897 New Directions in the French Novel (3). Samuel Beckett to the nouveau
roman. LEC
FREN 898 Studies in 20th Century French Literature:____(3). Various move-
ments, themes, or genres. May be repeated for credit. LEC
FREN 899 M.A. Thesis (1-6). THE
FREN 900 Seminar in French:____(3). Topics in literary, linguistic, and cultural
research. May be repeated for credit. LEC
FREN 995 Investigation and Conference (1-3). Readings and research projects in
French language, literature, and culture. Directed work to fulfill needs not met by
available courses. One-three hours credit in any semester. Maximum credit for
M.A.: Three hours. By special departmental permission only. RSH
FREN 999 Ph.D. Dissertation (1-12). THE

### Italian Courses

ITAL 502 Dante’s Divine Comedy I (3).
ITAL 503 Dante’s Divine Comedy II (3).
ITAL 695 Studies in Italian Literature (1-3).

### Genetics

Director: Erik Lundquist, erik@ku.edu, (785) 864-5853
Haworth Hall, 1200 Sunnyside Drive, Room 2034
Lawrence, KS 66045-7566
www2.ku.edu/~genet/genetics.html, jonmally@ku.edu, (785) 864-4311

Genetics Teaching Faculty: Ackley, Alexander, Benedict, Buechner, Cohen,
Corbin, Crawford, Dentler, Egan, Eggleston, Gegenheimer, Gleason, Greenfield,
Harsay, Haufier, Kelly, Lundquist, Macdonald, Neufeld, Orive, Picking, Redd,
Smith, Stetter, Suprenant, Taylor, Timmons, J. Ward, R. Ward, Weaver, Wiley, Zhang

The Genetics Program at KU offers graduate students an integrated and
multidisciplinary training in genetics focused on research. Students have the opportunity to interact with a diverse faculty who use modern molecular and mathematical approaches to
address many different questions in modern genetics, including molecular and developmental genetics, evolutionary and ecological genetics, and human genetics. Genetics Program
students earn a Ph.D. from a participating home department: Anthropology, Ecology and Evolutionary Biology, Molecular Biosciences, or Philosophy.

### Geography

Chair: Terry Slocum
Associate Chair: Johannes Feddema
Lindley Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7575, www.geog.ku.edu, (785) 864-5143
Graduate Adviser: Steve Egbert, 219C Lindley Hall, (785) 864-4252
Professors: Braaten, Dobson, Feddema, W. Johnson, Myers,
Shortridge, Warf, Woods
Professors Emeriti: Augelli, Dienes, McColl, Nunley, Sorenson
Associate Professors: Brown, Egbert, Herlihy, McCleary, O’Lear,
Slocum, Tucker, van der Veen
Assistant Professors: Brunsell, Cheong, Hirmas, J. Johnson, Li,
Mechem

The graduate curriculum emphasizes broad geographic training while encouraging in-depth commitment to specialized concentra-
tions. Students also are encouraged to take course work out-
side the department that complements their degree programs. Credit-hour requirements below are considered minimums for
degree programs. Programs are tailored by the student and ad-
viser to conform to the student’s interests and needs, as well as
to fulfill the general degree requirements.

The central thrust of the department and the chief capabilities
and interests of the faculty fall within these research-teaching areas:
(1) Human geography including cultural geography, regional
development, and environmental policy; (2) geographic infor-
mation science including cartography, geographic information
systems, and remote sensing; (3) physical geography including
geomorphology, soils, and biogeography; (4) regional geography
including Africa, East Asia, Russia, Latin America, and the
United States; and (5) atmospheric science and climatology.

### Admission

Applicants without prior training in geography are welcome but
are required to improve their basic knowledge of the broad divi-
sions of geography: systematic, methodological, and regional.
Courses taken to remedy deficiencies may not count toward
graduate degrees. Graduate Record Examination scores (verbal, quantitative, and analytical) are required of all applicants.
Submit your application online at www.graduate.ku.edu.
Send all other requested application materials to
The University of Kansas
Department of Geography
Lindley Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7575

Geography M.A. Degree Requirements
The program continues the general training of the undergraduate degree but also provides for concentration in preparation either for employment or further study. The student takes courses in several areas of the discipline as well as at least three courses in an acceptable concentration. The 30-credit-hour minimum for the M.A. thesis program may include 6 hours outside the department and a maximum of 6 hours for the master’s thesis. The M.A. degree requires a final oral examination. Students with 6 or more hours of Incomplete are denied permission to enroll until these hours are reduced to the allowable limit (5 hours).

Geography Ph.D. Degree Requirements
The aspirant is expected to demonstrate proficiency in research and achieve a teaching competence in geography. The student may concentrate in one area or may offer a concentration in a second area in the department or an outside discipline. Whatever the choice, the student develops the plan of research and study with the advice and supervision of professors in the chosen area(s) of concentration who also sit on the student’s examination and dissertation committees. A minimum of 30 hours of course and seminar work in addition to dissertation credit usually is required beyond the M.A.

There are several options for satisfying the Foreign Language or Other Research Skills requirement (see Doctoral Degree Requirements, Research Skills in the General Information chapter of this catalog), which must be completed before the aspirant can be admitted to the comprehensive examination. Possible options for meeting the requirement include the following:

1. Demonstrate a reading knowledge of two foreign languages relevant to the student’s research interest. For each language, the student must attain a level of competence to satisfy general requirements.
2. For a single foreign language, demonstrate a reading, writing, and speaking capability sufficient to enable the aspirant to do field work without an interpreter. An examination for competence, including written and oral portions, is conducted by a member of the department having expertise in that language or by an examiner from the appropriate language department.
3. Demonstrate a reading knowledge in one foreign language and a satisfactory capability in one research skill as listed below under 4a, 4b, 4c, and 4d.
4. Demonstrate a satisfactory capability in two research skills from the list below. The requirements are to be approved by the adviser with the agreement of the student affairs committee.

(a) Computer science: Complete a computer course in electrical engineering and computer science (e.g., C++, Fortran, or Visual Basic) and create a substantial computer program that illustrates a geographic application of that language. Both the course and the computer program must be approved by the computer programming committee of the Department of Geography.
(b) Mathematics: Pass 9 hours of courses at the 500 level or above.
(c) Statistics: Pass 9 hours of outside the geography department at the 500 level or above.
(d) Demonstrate research capability in a field relevant to the aspirant’s field(s) of specialization in geography. Examples are economics, sociology, psychology, geology, anthropology, and history. This involves at least 9 credit hours of graduate-level work, normally at KU, including a minimum of one research seminar.

The general requirement of two semesters (or one semester and one summer) of residence in full-time academic pursuit also must be met before taking the comprehensive examination.

For additional Ph.D. requirements, please see Doctoral Degree Requirements in the General Information chapter of this catalog.

Atmospheric Science M.S. Degree Requirements
Details of the regulations on graduate study are included in the department’s Policies for Graduate Study in Atmospheric Science, available from the department office.

Entering students are expected to have completed an undergraduate degree in a physical science (e.g., physics, chemistry, atmospheric science, oceanography), mathematics, or engineering, and studied mathematics, including vector calculus and ordinary differential equations.

Required courses for the program include ATMO 710 Atmospheric Dynamics, ATMO 720 Atmospheric Modeling, and GEOG 716 Advanced Geostatistics. Electives include 3 credit hours in atmospheric science at the 700 level or above and 6 hours at the 500 level or above outside the geography department. A maximum of 6 hours of 500- and 600-level atmospheric science courses may be included in the program (excluding ATMO 505). The master’s thesis is a demonstration of a student’s ability to formulate an atmospheric science research problem, collect and analyze relevant data, synthesize appropriate literature, arrive at logical conclusions, and present the entire exercise in a public academic forum.

Handbook for Graduate Students
Detailed information on departmental regulations is included in Graduate Study in Geography at the University of Kansas, available from the departmental office or online at www.geog.ku.edu.

Atmospheric Science Courses
ATMO 505 Weather Forecasting (3).
ATMO 506 Forecasting Models and Methods (3).
ATMO 515 Energy and Water Balance (3).
ATMO 521 Microclimatology (3).
ATMO 525 Air Pollution Meteorology (3).
ATMO 531 Topics in Atmospheric Science: _____ (1-3).
ATMO 605 Operational Forecasting (2).
ATMO 606 Forecasting Practicum—Private Industry (2).
ATMO 607 Forecasting Intern—National Weather Service (2).
ATMO 630 Synoptic Meteorology (3).
ATMO 634 Physical Climatology (3).
ATMO 640 Dynamic Meteorology (3).
ATMO 642 Remote Sensing (3).
ATMO 650 Advanced Synoptic Meteorology (3).
ATMO 660 Advanced Dynamic Meteorology (3).
ATMO 680 Physical Meteorology (3).
ATMO 690 Special Problems in Meteorology (1-3).
ATMO 697 Seminar for Seniors (1).

Some of the foremost cultural and regional geographers in the nation are faculty members at KU.
KU has one of the strongest reputations in physical geography in the nation.
Geographers trained at KU are now on faculties at major institutions throughout the country.
ATMO 699 Undergraduate Research (2).
ATMO 710 Atmospheric Dynamics (3). Presentation of contemporary approaches to the study of atmospheric dynamics. May include methodologies that provide insight into global, synoptic, mesoscale or microscale motions. Prerequisite: ATMO 660 or equivalent. LEC
ATMO 720 Atmospheric Modeling (3). Illustration and application of contemporary applied chemical and statistical description of atmospheric phenomena. Prerequisite: MATH 122, ATMO 640, ATMO 680, and a course in statistics, or consent of instructor. LEC
ATMO 727 Atmospheric Storms (3). The physical processes and operating principles of storms with an emphasis on the development and life cycles of extreme or unusual weather events including tornadoes, blizzards, lightning displays, and tropical storms. Prerequisite: EECS 138, MATH 121, and ATMO 320. LEC
ATMO 731 Advanced Topics in Atmospheric Science (1-3). Advanced investigation of special topics in atmospheric science. May include topics in dynamic, physical, or synoptic meteorology or climatology as well as related topics in earth and physical sciences. May be repeated if topic differs. LEC
ATMO 750 Numerical Weather Prediction (3). An exploration of the mathematical methods used to describe the current state of the atmosphere and to predict future states. Current operational numerical weather prediction techniques will be included. Prerequisite: ATMO 660. LEC
ATMO 825 Seminar in Climatology (2-3). LEC
ATMO 827 Seminar in Atmospheric Science (1-3). LEC
ATMO 899 Master’s Thesis (1-10). THE

Geography Courses
GEOG 510 Human Factors (4).
GEOG 511 Intermediate Cartography: (1-6).
GEOG 513 Cartographic Design (3).
GEOG 514 Visualizing Spatial Data (4).
GEOG 515 Behavioral Systems (3).
GEOG 516 Applied Multivariate Analysis in Geography (3).
GEOG 517 Data Handling and Map Symbolization (3).
GEOG 519 History of Cartography (3).
GEOG 521 Microclimatology (3).
GEOG 531 Topics in Physical Geography: (1-3).
GEOG 532 Geoaeromology (3).
GEOG 535 Soil Geography (5).
GEOG 536 Landscape Ecology (3).
GEOG 537 Elements of Plant Geography (3).
GEOG 538 Environmental Soil Physics and Chemistry (4).
GEOG 541 Geomorphology (4).
GEOG 550 Environmental Issues in Africa (3).
GEOG 551 Intermediate Economic Geography (3).
GEOG 552 Topics in Urban/Economic Geography: (1-3).
GEOG 553 Geography of African Development (3). NW
GEOG 556 Geography of the Energy Crisis (3).
GEOG 557 Cities and Development (3).
GEOG 560 GIS Application Programming (3).
GEOG 570 Geography of American Indians (3). NW
GEOG 571 Topics in Cultural Geography: (1-3).
GEOG 572 Political Geography (3).
GEOG 573 Advanced Geographic Analysis (3).
GEOG 575 Geography of Population (3).
GEOG 576 Cultural Geography of the United States (3).
GEOG 579 Geography of American Foodways (3).
GEOG 591 Geography of Latin America (3). SC
GEOG 592 Middle American Geography (3).
GEOG 593 Central American Peoples and Lands (3).
GEOG 594 Geography of the Former Soviet Union (3).
GEOG 595 Geography of Eastern Europe (3).
GEOG 596 Geography of China (5).
GEOG 597 Geography of Brazil (3).
GEOG 657 Geophysical Models (3).
GEOG 658 Topics in Geographic Information Sciences: (1-6).
GEOG 670 Cultural Ecology (3).
GEOG 710 Information Design (3). Concepts and principles for the organization of verbal, numerical, and graphic/spatial data and their application to the production of information displays and instruments. Examination of the evolution of the information design process from the traditional, document oriented to interactive user-centered design approaches. The nature of human information processing in handling information for both visualization and analysis, with particular emphasis on decision-making and usability. Prerequisite: GEOG 510, INDD 510, PSYC 318, PSYC 685, or equivalent, or consent of instructor. LEC
GEOG 711 Advanced Cartography: (3). An investigation of special topics in cartography. Can be repeated for different topics. Prerequisite: Consent of instructor. LEC
GEOG 713 Practicum in Cartography (1-6). Experience in the organization and presentation of cartographic material in lecture, discussion, and laboratory formats. May be repeated to a total of six credits. Prerequisite: Consent of instructor. FLD
GEOG 714 Field Experience (3). Working in a new environment presents problems unlike those encountered in a classroom situation. Data collection techniques and exercises discussed in this off-campus course are intended to provide experience in the practical application of cartographic principles and techniques. May be repeated to a total of six credits. Prerequisite: Consent of instructor. LEC
GEOG 716 Advanced Geostatistics (3). An introduction to the practical application of advanced geostatical statistical techniques. Potential topics include: spatial regression, interpolation, clustering, and advanced nonparametric statistics. Knowledge of a statistical package and GIS is assumed. Prerequisite: GEOG 516 or equivalent and GEOG 358 or equivalent. LEC
GEOG 719 Development of Geographic Thought (2-3). Critical analysis of the growth of geographic thought from antiquity to the present. Emphasis on the historical and ideological development of ideas and theories. May be repeated to a total of six credits. Prerequisite: Twenty hours of geography or consent of instructor. LEC
GEOG 726 Remote Sensing of Environment II (4). An overview of techniques for computer analysis of digital data from earth orbiting satellites for environmental applications. Topics covered include: data formats, image enhancements and analysis, classification, thematic mapping, and environmental monitoring and monitoring application. The laboratory exercises provide hands-on experience in computer digital image processing in the laboratory department’s NASA Earth Science Remote Sensing Laboratory. Prerequisite: Introductory statistics and GEOG 526 or equivalent. LEC
GEOG 731 Topics in Physical Geography: (1-3). An investigation of special topics in physical geography. May include specific course work under the headings of geomorphology, climatology, soils, vegetation, quaternary, paleoenvironments, hydrology, etc. May be repeated. RSH
GEOG 733 Advanced Biogeography Field and Laboratory Techniques (3). This course provides graduate students with practical experience in field data collection techniques and laboratory data analysis methods. During the first half of the semester, students will work in the field using a variety of methods to measure such vegetation characteristics as: cover, density, biomass, leaf area, and canopy architecture. Students will gain experience in the use of field instruments including a spectroradiometer, and techniques for quantifying vegetation biophysical attributes. The laboratory analyses component will include: data summary, data entry, correlation, regression, MANOVA, cluster analysis, and data display, and reporting. Recommended: GEOG 516 or multivariate statistics equivalent. LEC
GEOG 735 Soil Geomorphology (3). Examines the interaction of pedogenic and geomorphologic processes during the Quaternary with an emphasis on strategies and methodologies employed in soil-geomorphic studies. Group research projects incorporating field data collection and analyses are required. Prerequisite: GEOG 335 or 335 or consent of the instructor. LEC
GEOG 741 Advanced Geomorphology (1-3). Detailed discussion of processes and landforms of present and past environments. Consideration of specific processes during interglacial or glacial periods will be included, and general morphology, and fluvial, arid regions, glacial, and shoreline geomorphology. Course may be taken more than once. (Same as GEOL 741.) Prerequisite: GEOG 541. LEC
GEOG 749 Topics in Stable Isotopes in the Natural Sciences: (2-3). Isotopic compositions of substances provide powerful insights into many topics in the natural sciences. Applications of isotopic analyses of carbon, hydrogen, oxygen, and nitrogen to selected research topics such as plant resource use, food web analysis, paleoecology, paleodiet reconstruction, hydrology, and soils genesis will be examined. Knowledge of isotope chemistry is not required. (Concepts necessary to understand pertinent articles will be taught during the first class meetings.) May be repeated. (Same as BIOL 749.) LEC
GEOG 751 Analysis of Regional Development (3). An analytical approach to spatial organization of economic activities and aspects of growth and development. Location theory and the geography of trade and migration. A research paper is required. Prerequisite: GEOG 551, or a course in economics, or consent of instructor. LEC
GEOG 752 Topics in Urban/Economic Geography: (1-3). An investigation of special topics in urban/economic geography. May include specific course work under the headings of energy, economic development, international trade, environmental perception, housing, transportation, and migration. May be repeated. LEC
GEOG 756 Energy Problems and the Economic-Physical Environment (2-3). This course investigates the economic, social, political, and environmental conditions of energy production, transport, and use: total energy consumption and mix, relations to the level and structure of the economy, substitutability of fuel and energy sources, and resource endowment, an internal energy setting. Prerequisite: GEOG 510 or a course in economics or consent of instructor. LEC
GEOG 758 Geographic Information Science (4). This course integrates topics in geographical information science (GISc) with spatial analytical techniques to solve social problems. Focuses on the most current research in GISc to build on its relevance to the environmental sciences, natural resource management, and spatial decision-making. Students are expected to apply the concepts and techniques learned in this class to their own research projects. Prerequisites: GEOG 316 and GEOG 358, or consent of instructor. LEC
GEOG 771 Topics in Cultural Geography: (1-3). An investigation of special topics in cultural geography. May include special course methodology, material culture, foodways, religion, and similar topics. May be repeated. LEC

GEOG 772 Problems in Political Geography (3). Case studies of regional and national power settings with particular emphasis upon the geographical analysis of political developments in unstable areas of the world. Prerequisite: GEOG 575 or GEOG 755. LEC

GEOG 773 Humanistic Geography (3). A discussion and project-oriented course focused on ways of studying the character and meaning of places. Concepts examined include place image and image makers, landscapes as text, sense of place, vernacular regions, and alternate representations of space. Prerequisite: Graduate standing or fifteen hours of geography or consent of instructor. LEC

GEOG 775 Proseminar in Population Geography (3). Evaluation of problem formulation data gathering, research methods, and substantive knowledge in the geography of human populations. Concurrent auditing of GEOG 757 plus an additional meeting each week. Prerequisite: GEOG 516 and GEOG 556, and SOC 514. LEC

GEOG 790 North American Regions: (3). A detailed description and analysis of selected regions of North America. Prerequisite: An introductory geography course or background in United States or Canadian history, social science, or culture or consent of instructor. LEC

GEOG 791 Latin American Regions: (3). A description and analysis of the principal sources of geographic information pertaining to portions or all of Latin America. Prerequisite: GEOG 591 or concurrent auditing of GEOG 591, or consent of instructor. LEC

GEOG 794 Regions of the Former U.S.S.R. (3). A description and analysis of geographic change pertaining to the successor states to the USSR. Prerequisite: GEOG 775 or equivalent. LEC

GEOG 802 Urban Geographic Information Systems (3). An advanced survey of urban GIS/LIS focusing on: (1) history; (2) the wide range of applications from Automated Mapping/Facilities Management (AM/FM) to topologically related GIS; (3) generic analytical functions in both raster and vector modalities; and (4) software employed, hardware platforms, and institutional settings. A limited experience with the use of GIS is provided from exercises employing ARC/INFO software. Prerequisite: Some experience with DOS based computing. LEC

GEOG 805 Introduction to Graduate Study (2). A course required of all M.A. candidates to introduce geography as a research discipline. The course focuses on writing and editing, library materials, and the history and philosophy of the discipline. LEC

GEOG 808 Practicum Seminar (2). The second of two courses required of M.A. students designed to provide experience in the development of research proposals and exposure to methodologies in geography. This course deals with approaches to geographic problem, and involves individual examination of special topics which require preparation, presentation, and critical evaluation of research proposals. LEC

GEOG 818 Problems in Production Cartography (1-3). Advanced instruction in the theory and practice of producing maps and other related graphics for classroom instruction and research projects. Emphasis will be on current photo-mechanical and automated cartographic techniques. Prerequisite: By appointment. Consent of instructor. Fifteen hours of Geography courses or background in Russian, East European or Middle East studies, or consent of instructor. LEC

GEOG 795 European Regions: (3). Prerequisite: Fifteen hours of geography, background in specified area, or consent of instructor. LEC

GEOG 796 Asian Regions: (2-3). Prerequisite: Fifteen hours in geography courses or background in Asia, or consent of instructor. LEC

GEOG 802 Urban Geographic Information Systems (3). An advanced survey of urban GIS/LIS focusing on: (1) history; (2) the wide range of applications from Automated Mapping/Facilities Management (AM/FM) to topologically related GIS; (3) generic analytical functions in both raster and vector modalities; and (4) software employed, hardware platforms, and institutional settings. A limited experience with the use of GIS is provided from exercises employing ARC/INFO software. Prerequisite: Some experience with DOS based computing. LEC

GEOG 805 Introduction to Graduate Study (2). A course required of all M.A. candidates to introduce geography as a research discipline. The course focuses on writing and editing, library materials, and the history and philosophy of the discipline. LEC

GEOG 808 Practicum Seminar (2). The second of two courses required of M.A. students designed to provide experience in the development of research proposals and exposure to methodologies in geography. This course deals with approaches to geographic problem, and involves individual examination of special topics which require preparation, presentation, and critical evaluation of research proposals. LEC

GEOG 818 Problems in Production Cartography (1-3). Advanced instruction in the theory and practice of producing maps and other related graphics for classroom instruction and research projects. Emphasis will be on current photo-mechanical and automated cartographic techniques. Prerequisite: By appointment. Consent of instructor. Fifteen hours of Geography courses or background in Russian, East European or Middle East studies, or consent of instructor. LEC

GEOG 835 Practicum in Soil Mapping and Soil Erosion (3). This course is designed to give graduate students field experience in soil mapping and in the evaluation of soils for loss through processes of erosion. Prerequisite: GEOG 535 or equivalent. Consent of instructor. LEC

GEOG 858 Environmental Geographic Information Systems (4). An introduction to the use of GIS for environmental inventory, monitoring, and modeling. This course integrates the principles of landscape ecology with the analytical tools of GIS, remote sensing, and spatial analysis. Students will be taught GIS methodologies used to address real world problems and the use of GIS spatial analysis techniques to characterize landscapes and monitor their change. Prerequisite: GEOG 316 and GEOG 558 or equivalents, multivariate analysis recommended. LEC

GEOG 890 Geographic Internship (1-6). Supervised professional experience. The student submits a program committee a proposal describing the internship prior to enrollment. Upon acceptance, regularly scheduled meetings with the advisor provide assistance, guidance and evaluation of progress in the professional experience. A written summary of the experience or outcomes of the research project are prepared independently by the student, a representative of the host agency, and the advisor. Total credit not to exceed six hours. Prerequisite: Twelve hours of graduate level geography courses and consent of program committee. FLD

GEOG 898 Readings in Geography (1-4). RSH

GEOG 899 Master’s Thesis (1-10). THE

GEOG 911 Seminar in Cartography: (1-4). Study of selected topics in cartographic representation of space. May be repeated. LEC

GEOG 937 Seminar in Vegetation Geography (1-3). (Same as BIOL 968.) LEC

GEOG 939 Seminar in Fluvial Systems (2-3). Study of selected topics in theory and method of fluvial systems. Samples include hydraulic geometry, the nature of alluvial sediments, and basin case studies. Topic will be specified in advance. LEC

GEOG 957 Seminar in Urban and Economic Geography (2-3). LEC

GEOG 958 Seminar in Geographic Information Systems (2-4). Study of selected topics in analysis of digital geographic data. May include research and/or development work. Prerequisite: GEOG 575 or equivalent, or consent of instructor. LEC

GEOG 970 Seminar in Cultural Geography: (3). Study of selected topics in the theory and method of cultural geography. Samples include religious patterns, folk architecture, and place-defining novels. Topic will be specified in advance. LEC

GEOG 972 Seminar in Political Geography (2-3). Study of selected topics in the theory and method of political geography. Samples include insurgent states, electoral patterns, and political ecology. Topic will be specified in advance. Prerequisite: GEOG 772 or consent of instructor. LEC

GEOG 975 Seminar in Population Geography (2-3). Study of selected geographic topics and problems dealing with the distribution of human populations. Prerequisite: GEOG 775 or consent of instructor. LEC

GEOG 980 Seminar in Geography: (1-3). LEC

GEOG 990 Seminar in Regional Geography: (1-3). (Selected areas to be specified.) LEC

GEOG 998 Research in Geography (1-5). RSH

GEOG 999 Doctoral Dissertation (1-10). THE

Geology

Chair: Robert H. Goldstein, (785) 864-2738
Lindley Hall, 1475 Jayhawk Blvd., Room 120
Lawrence, KS 66045-7575, www.geo.ku.edu, (785) 864-4974
Graduate Adviser: Ross A. Black, 316A Lindley Hall, (785) 864-2740
Professors: Fransen, Goldstein, Lieberman, Selden, Steeples, Walker
Professors Emeriti: Angino, Dellwig, Dort, Enos, Hambleton, McElwee, Robison, Rowell, Van Schmus
Research Professor: Dreschhoff
Courtesy Professors: Butler, Doveton, Gerhard, Krishtalka, Martin, Sophocleous, E. Taylor, T. Taylor, Watney, Whittmore
Associate Professors: Black, Devlin, Fowle, Gonzalez, Hasiotis, Kamola, Macpherson, Roberts, Tsoflias, Stockli, Walton
Courteesy Associate Professors: Engel, Ludvigson, Mandel, Miller
Assistant Professors: Marshall, Moeller, Olcott, Rankey, Stearns, M. Taylor
Courtesy Assistant Professor: Macfarlane

The department offers the M.S. and Ph.D. in geology but permits specialization in a number of areas of geology and geophysics and hydrogeology. Active areas of instruction and research include geophysics, geomorphology, geochemistry, microbial bio-geochemistry, paleontology, sedimentology, tectonics, and petroleum geology. Students also may work with faculty supervisors at the Kansas Geological Survey and at Kansas State University.

Admission

Admission is based on academic records including grade-point average and general preparedness in geology and supporting sciences, letters of recommendation, and the applicant’s stated academic and professional interests and goals. Results of the aptitude tests of the Graduate Record Examination are required. An attempt is made to balance the interests of students with the availability of faculty members to supervise them and laboratory space in which they may work. Consequently, new admissions in areas of geology that are heavily subscribed or in which the department has little expertise may be limited. As a result, some students who meet KU’s minimum standard for admission may be refused. Students who do not hold master’s degrees in geology normally are admitted to pursue the master’s degree. Students with exceptional records may be invited to study for the Ph.D. without first earning the M.S. degree.
Submit your application online at www.graduate.ku.edu. Send all other requested application materials to

The University of Kansas
Department of Geology
Lindley Hall, 1475 Jayhawk Blvd., Room 120
Lawrence, KS 66045-7575

M.S. Degree Requirements
Details of the regulations on graduate study are included in the department’s Ground Rules for Graduate Students, available from the department office.

Prerequisites include credit in one year each of general biology, general chemistry, general physics, and calculus, plus junior- or senior-level courses in mineralogy, petrology, structural geology, paleontology, stratigraphy, geophysics, and a summer course in field geology. Students planning to specialize in geophysics also should have more advanced backgrounds in calculus and physics. Incoming graduate students meet with a departmental advisory review committee before enrollment to identify deficiencies and strengths and to set up curricula aimed at providing a broad background in geology at the intermediate to advanced level during the first year. Some deficiencies may be waived at this time if they are deemed nonessential.

Geology has many subdisciplines, and the department tailors each student’s curriculum to the needs of the individual. There is no departmental core curriculum or list of required courses.

Thesis Option (M.S. Degree). The master’s degree curriculum requires completion of 30 credit hours, including up to 6 credit hours for thesis research and an acceptable master’s thesis. The student sets the curriculum in consultation with a three-member advisory committee selected from the Graduate Faculty and approved by the graduate adviser. Course work counted toward the degree must be distributed to provide a comprehensive general knowledge of geology in addition to specialized knowledge required for the thesis. It may include courses in departments other than geology.

Although the department does not award a master’s degree in geophysics, students can specialize in geophysics at the master’s level. A similar arrangement is possible in the Department of Physics and Astronomy. This specialization is overseen by a committee with representatives from the Department of Physics and Astronomy, the Kansas Geological Survey, and the Department of Geology. The committee recommends requirements for the specialty degree and coordinates educational activities in geophysics. Research is supervised by departmental faculty members as well as by adjunct faculty members who are staff members of the Kansas Geological Survey. Similar arrangements can be made for students wishing to specialize in hydrogeology or paleontology.

The student must maintain a 3.0 grade-point average in geology and supporting science courses and pass a final oral general examination with emphasis on the areas of geology relevant to the thesis project. This examination may be repeated once, if necessary.

Nonthesis Option (M.S. Degree). A student may complete an M.S. degree program based primarily on course work and specialized skills. For this degree, a minimum of 36 credit hours of graduate-level study must be completed, including two written reports based on small projects. The student determines the structure of the project in consultation with an advisory committee of five faculty members. A student must declare an intention to follow the nonthesis option during the first semester of graduate study. The nonthesis degree is a terminal degree and normally cannot lead to doctoral study. In addition to maintaining a 3.0 grade-point average in course work, the student must demonstrate proficiency in the areas of geology covered by the program. This is accomplished by satisfactory performance on a series of written examinations assembled and administered by the advisory committee. These constitute the final examination for the degree and may be repeated once, if necessary.

During or after the period of residence, a student who wishes to change to an M.S. (thesis) program or a Ph.D. program must petition the graduate studies committee.

Ph.D. Degree Requirements
Doctoral students can specialize in any area of faculty expertise, including hydrogeology and geophysics. Prospective Ph.D. candidates are subject to the same initial requirements as master’s students. The master’s degree is not a prerequisite for doctoral aspirancy. A student with good backgrounds and good performance during the first two semesters may be invited to proceed directly toward the doctorate.

The student’s advisory committee and the student construct a curriculum that offers the best preparation for the chosen field of interest and satisfies the research skills requirement. Each student is expected to enroll in courses in supporting fields to develop a multidisciplinary approach to geology.

Research Skills. The department does not require specific foreign languages or other research skills for the Ph.D. Instead it gives advisory committees authority to develop curricula that prepare students for their chosen fields. With the approval of the advisory committee, the student may meet the research skills requirement by taking a curriculum or by completing a combination of languages, research skills, and courses. The curriculum in lieu of research skills is normally at least three graduate-level courses outside the department that are relevant to the specialty. The curriculum must be approved by the graduate adviser, and a list of these courses must be in the student’s file. This curriculum or the research skills must be completed before the oral comprehensive examination can be taken.

Admission to Candidacy. To be admitted to Ph.D. candidacy, a student must pass an oral comprehensive examination on the specialty in geology in which the student is doing doctoral research and on other relevant areas of geology or supporting sciences. The student must prepare and have approved a research proposal based on the doctoral research project before the oral comprehensive examination. The examination is based on the material presented in the proposal and its application to geology in general. The examination is conducted by a five-member faculty committee; one member of the committee must be from a department other than geology and is appointed by Graduate Studies on recommendation of the department. This committee is also responsible for conducting a final oral examination based on the doctoral dissertation. A three-person committee supervises research and preparation for the dissertation.

Active areas of instruction and research in geology at KU include geophysics, geomorphology, geochemistry, microbial biogeochemistry, paleontology, sedimentology, tectonics, and petroleum geology.

Paleontology at KU ranks third in the nation among public universities, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
Geology Courses

GEOL 512 Igneous and Metamorphic Petrology (3).
GEOL 513 Petrology Laboratory (1).
GEOL 521 Paleontology (3).
GEOL 523 Paleontology Laboratory (1).
GEOL 528 The Biology and Evolution of Fossil Plants (3).
GEOL 529 Laboratory in Paleobotany (1).
GEOL 532 Stratigraphy (4).
GEOL 534 Volcanology (3).
GEOL 535 Petroleum and Subsurface Geology (4).
GEOL 536 Geological Log Analysis (1).
GEOL 537 Petroleum Reservoir Characterization (3).
GEOL 541 Geomorphology (4).
GEOL 551 Engineering Geology (3).
GEOL 552 Introduction to Hydrogeology (3).
GEOL 560 Introductory Field Geology (3).
GEOL 561 Field Geology (3).
GEOL 562 Structural Geology (4).
GEOL 571 Natural Disasters (2-3).
GEOL 572 Geophysics (3).
GEOL 573 Geodynamics and Plate Tectonics (3).
GEOL 575 Seismic Exploration (3).
GEOL 576 Potential Fields Exploration (3).
GEOL 577 Environmental Geophysics (3).
GEOL 591 Topics in Geology: _____ (1-5).
GEOL 711 X-Ray Analysis (1-2). Introduction to the theory and practice of X-ray diffraction and X-ray fluorescence analysis as applied to geological materials. Includes safety training necessary for the operation of X-ray analytical equipment in the department. Prerequisite: GEOL 311 and PHSX 115 or PHSX 212. LEC
GEOL 712 Microstructures and Petrofabrics (3). This course is geared towards developing a qualitative and quantitative understanding of the fundamentals of rock and mineral deformation necessary to interpret comprehensively microstructural data. These structures and processes contain a wealth of information on kinematics, rheology, and boundary conditions of deforming rocks, important information that often goes unnoticed and unused. This course builds on knowledge acquired in undergraduate structural geology and petrology courses and will give students the tools for a more rigorous and sophisticated evaluation of thin sections and quantitative microstructural and textural data. Required field trip. Prerequisite: GEOL 512 and GEOL 562; or consent of the instructor. LEC
GEOL 713 Advanced Petrology (1). Advanced topics in igneous and metamorphic petrology with emphasis on field and isotopic modeling. Course may be repeated as topics covered vary. LEC
GEOL 714 Thermochronology (3). This advanced course is intended to provide students with an in-depth understanding of the fundamentals and an appreciation of the complexities of thermochronology. The primary focus of this course is on modern thermochronological methods and applications, including the interpretation of geothermal data, numerical modeling of complex thermochronological data, and hands-on laboratory experience in the KU thermochronology facilities. Prerequisite: MATH 122 and GEOL 717; or consent of the instructor. LEC
GEOL 715 Geochemistry (3). Application of chemical equilibria and kinetics to geologic environments and processes, with emphasis on processes involving solute equilibria. Introduces principles and applications of thermodynamic aspects of equilibria. Prerequisite: CHEM 188 and MATH 122. LEC
GEOL 716 Geologic Thermodynamics (2). Classical thermodynamics with emphasis on phase equilibria, solid-solution chemistry, and modeling of natural systems. Prerequisite: Second semester calculus, or permission of instructor. LEC
GEOL 717 Geochronology (2-4). Principles and applications of geochronology in modern geology and cosmochronology, including use of radiogenic isotopes as geochronological tools. Prerequisite: GEOL 512 or consent of instructor. LEC
GEOL 718 Stable Isotope Geochemistry (1-3). Principles and applications of isotopes among stable isotopes in the geological environment, with emphasis on the isotopic systems of hydrogen, carbon, and oxygen. Prerequisite: GEOL 715 or consent of instructor. LEC
GEOL 721 Micropaleontology (3). Systematics, paleontology, evolution, and biotratigraphy of microfossils, particularly foraminifera, ostracodes, and conodonts. Prerequisite: Material for study selected from basic micropaleontology and geologic problems. Prerequisite: GEOL 521 or BIOL 100 or 152. LEC
GEOL 722 Paleoecology (3). Principles of ecology as applied to the interpretation of past environments. Prerequisite: GEOL 521. LEC
GEOL 723 Paleontology Museum Apprenticeship (1-6). N. Provides directed, practical experience in care and management of paleontology collections, public education, exhibits, and museum administration with emphasis tailored to fit the needs and interests of each student. Students should expect to spend a minimum of five hours per week for each hour in which they are enrolled. (Same as AMS 799, ANTH 799, BIOL 799, HIST 799, and MUSE 799.) FLD
GEOL 724 Paleobiogeography (3). The study of the coevolution of the Earth and its biota. The class will focus on applying phylogenetic approaches with fossil taxa to study how tectonic change has influenced the evolution of life and also to determine what evolutionary patterns can tell us about the nature and sequence of geologic events. Prerequisite: GEOL 521, or consent of the instructor. LEC
GEOL 725 Paleontology of Lower Vertebrates (3). General account of the osteology, geologic distribution, and evolution of the principal groups of fishes, amphibians, reptiles, and birds. Lectures and laboratory. (Same as BIOL 790.) Prerequisite: GEOL 105 or GEOL 304, or GEOL 521. LEC
GEOL 726 Paleontology of Higher Vertebrates (3). Evolution of mammals and anatomical modifications involved in the process as ascertained from the fossil record. Lectures and laboratory. (Same as BIOL 791.) Prerequisite: GEOL 105 or GEOL 304 or GEOL 521. LEC
GEOL 727 Macroevolution (3). This course will present a broad survey of topics in macroevolution including the differences between micro- and macroevolutionary patterns and processes and the manners of formulating and analyzing macroevolutionary questions. Discussions will focus on the relevance of hierarchy theory and levels of selection; an overview of species concepts, both ontological and epis- temological; and an analysis of the neo-Darwinian synthesis as related to innovation in evolutionary theory. In addition, the relevance of nature and sequence of geologic events. Prerequisite: GEOL 521, or consent of the instructor. LEC
GEOL 728 Paleopedology (3). Paleopedology is the study of ancient soils preserved in the geologic record. The course covers concepts of paleopedology and its appli- cation to the interpretation of paleoenvironmental, paleoecologic, and paleohydrogeologic settings and its use in sequence stratigraphy and paleopedology. Prerequisite: GEOG 535, GEOL 331, or GEOL 532; or consent of the instructor. LEC
GEOL 729 Iknohlogy (3). Iknohlogy is the study of organism-substrate interactions. Topics will cover concepts and applications of iknohlogy in the marine and continental realms, including the behavior of such organisms as microbes, plants, invertebrates, and vertebrates preserved in the geologic record as trace fossils. Iknohlogy is applied in geology and in the petroleum industry to interpret ancient environments, hydrogeology, ecology, and climate. Prerequisite: GEOL 331, GEOL 521, or GEOL 532; or consent of the instructor. LEC
GEOL 731 Terrigenous Depositional Systems (4). Processes that operate in recent sedimentary environments, responses of sediment to those processes, and criteria for distinguishing depositional environments from ancient ones. Lectures, practical exercises, and field trips. Prerequisite: GEOL 331 or GEOL 532. LEC
GEOL 732 Carbonate Depositional Systems (3). Patterns and processes of contemporaneous carbonate deposition and diagenesis, depositional models; applications
to interpretation of carbonate rocks. Lecture, discussion, laboratory and field trips. Prerequisite: GEOL 352 (may be taken concurrently).LEC

GEOL 741 Advanced Geomorphology (1-3). Detailed discussions of processes and landforms characteristic of specific environments. Considered during separate semesters will be general methodoloy, and fluvial, arid regions, glacial, and shore-line geomorphology. (May be taken more than once. (Same as GEOL 741.) Prerequisite: GEOL 541. LEC

GEOL 751 Physical and Transport Hydrogeology (4). A study of fluid flow in the subsurface including transport of constituents with the fluid. Physical transport will consider (1) the origins of basic parameters such as porosity and hydraulic conductivity, and their relationship to typical geologic materials, (2) basic equations of flow, such as Darcy’s Law and the conservation equation, and (3) application of these concepts. Applications considered may include hydraulic testing, modeling, and recharge-systems. Considered during separate semesters will be processes of solute and contaminant mass movement in porous and fractured media by advection and diffusion. The effects of attenuating mechanisms such as partitioning, chemical and biological transformations will also be discussed. The mathematical expression of these processes will be developed and applied using computer models. (Same as CE 754.) Prerequisite: Differential Equations and Introduction to Hydrogeology or Fluid Mechanics or consent of instructor. LEC

GEOL 753 Chemical and Microbial Hydrogeology (4). Lecture and discussion of chemical and microbiological controls on groundwater chemistry. Topics include thermodynamic and microbiological controls on water-rock reactions; kinetics; and microbiological, chemical and isotopic tools for interpreting water chemistry with respect to chemical and physical changes. Changes of water chemistry, changes along groundwater flow paths, and an introduction to contaminant biogeochemistry will be discussed through the processes of speciation, solubility, sorption, ion exchange, oxidation-reduction, elemental and isotopic partitioning, microbial metabolism, and other factors. A basic understanding of the principles of environmental microbiology, including cell structure and function, microbial metabolism and respiration, microbial genetics and kinetics of microbial growth will be covered. (Same as CE 753.) Prerequisite: GEOL 250 or equivalent courses, or consent of instructor, or consent of the instructor. LEC

GEOL 761 Regional Field Geology (1-5). A detailed field study of a carefully selected area that includes features of several phases of geology. Field trip fee. Prerequisite: GEOL 561 or equivalent and departmental approval. FLD

GEOL 763 Tectonics and Regional Geology (3). Topics vary with demand and include fundamental features of plate tectonics, interpretation and distribution of regional geology of mountain belts with emphasis on tectonic setting and processes, regional geology, and tectonics of selected mountain belts. Prerequisite: GEOL 562, GEOL 515, or consent of instructor. LEC

GEOL 771 Advanced Geophysics (1-3). Topics vary with demand and include heat flow, wave propagation, synthetic seismograms, groundwater exploration, geothermal exploration, electrical methods in exploration, rock mechanics-tectonics, rock magnetism, geomagnetism, paleomagnetism, geophysical inverse theory, and others upon sufficient demand. May be repeated for different topics. (Same as PHSX 727.) Prerequisite: GEOL 572 or GEOL 573/PHSX 528 or consent of instructor. LEC

GEOL 772 Geophysical Data Analysis (3). Fourier analysis, sampling theory, prediction and smoothing, estimation of statistical data, correlation techniques, deconvolution. Examples will be chosen from various fields of geophysics. (Same as PHSX 722.) Prerequisite: MATH 250/250A/ARC 250/CE 250/CAPE 250/ECECS 250/PHSX 250. FLD

GEOL 773 Seismology (3). General theory of seismic waves, wave propagation, and free extrapolation (migration) by finite difference methods, construction of travel-time curves, reflection and attenuation of coefficients, earthquake source mechanism, distribution and forecasting of earthquakes. (Same as PHSX 723.) Prerequisite: MATH 250/250A/ARC 250/CE 250/CAPE 250/ECECS 250/PHSX 250. May be repeated for different purposes. FLD

GEOL 774 Finite Difference Methods for Geophysics (2-3). Application of finite difference methods to solve the partial differential equations that commonly occur in the study of geophysics. Representative examples will be drawn from groundwater flow, gravity and magnetic modeling, and seismic wave propagation. Emphasis will be on obtaining actual solutions for practical problems. Prerequisite: MATH 250, or MATH 320, or consent of the instructor. LEC

GEOL 775 Near-Surface Seismology (3). Theoretical and applied study of all aspects of near-surface reflection, refraction, and surface-wave seismology from design and acquisition to interpretation. Prerequisite: MATH 250, GEOL 572, or consent of the instructor. LEC

GEOL 780 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of problems, classification of problems, and evaluation of collection and building environments. Emphasis will be placed on how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, BIOL 700, HIST 722 and MUSE 703.) Prerequisite: Museum Studies student. Natives Studies student, or consent of instructor. LEC

GEOL 784 Introduction to Museum Public Education (3). Consideration of the goals and methods in the planning and presentation of museum programs, including potential audience, development of exhibits, and teaching and learning. Workshops and demonstrations have been designed for students to gain practical experience working with various programs and developing museum programs. (May be taken concurrently or equivalent, or consent of the instructor. LEC

GEOL 785 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. (Same as AMS 730, BIOL 785, HIST 724, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 791 Advanced Topics in Geology (1-5). Selected offerings in geology. Intended primarily for graduate students and qualified seniors. May include lectures, discussions, reading, laboratory and field work. May be taken more than once. LEC

GEOL 805 Introduction to Conservation and Preservation of Cultural Heritage (3). The conservation and preservation of physical and architectural heritage, the physical, and engineering characterization of a petroleum reservoir. Includes mapping, petrophysical, production, and pressure analysis; and numerical modeling. Considers economic analysis of steps to improve recovery. Students who have completed GEOL 557 may not take GEOL 805 for credit. LEC

GEOL 807 Field and Laboratory Methods: Physical Hydrogeology (1). Introduction to field and laboratory methods commonly used in hydrogeology. Practical experience with common water level measurement techniques, various well pumping techniques, well installation and geophysical core sampling, and hydrogeological testing. Prerequisite: Introductory course in hydrogeology and familiarity with computer use for data processing, or consent of instructor. FLD

GEOL 852 Field and Laboratory Methods: Contaminant Transport (1). Introduction to laboratory methods for evaluation of contaminant transport in ground- water. The determination of pollutant parameters followed by development and implementation of computer models. Students will gain experience building models starting from basic transport equations using a spreadsheet platform and, where appropriate, commercial software packages. Prerequisite: GEOL 571 (may be taken concurrently) or equivalent, or consent of the instructor. LAB

GEOL 853 Field and Laboratory Methods: Chemical Hydrogeology (1). Practical experience in measuring unstable chemical parameters in groundwater, including pH, Eh, dissolved oxygen, temperature, alkalinity, specific conductance, and turbidity. Practical experience in collecting water samples for chemical analysis, appropriate sample containers and preservation methods, and special techniques for collecting samples for determines of parameters sensitive to environmental changes such as oxygen level or temperature. Prerequisite: GEOL 785 (may be taken concurrently) or equivalent, or consent of the instructor. FLD

GEOL 891 Special Studies in Geology (1-5). May be repeated. RSCH

GEOL 899 Master’s Thesis (1-12). THE

GEOL 911 Advanced Invertebrate Paleontology (1-3). Detailed study of systematic, morphology, stratigraphic distribution and paleoecology of major groups of organisms in the fossil record. Specific group or groups covered will vary according to student and faculty needs. May be repeated. Prerequisite: GEOL 511 and GEOL 531 or GEOL 532. LEC

GEOL 932 Carbonate Petrology (3). Study of the physical and chemical factors important in the genesis and diagenesis of carbonate rocks. Includes the application of principles learned from reservoir geosciences to problems of diagenesis. May be repeated. Prerequisite: ANTH 251 or consent of instructor. LEC

GEOL 933 Sandstone Petrology (3). Study of the physical and chemical factors important in the genesis and diagenesis of carbonate rocks. Includes the application of principles learned from reservoir geosciences to problems of diagenesis. May be repeated. Prerequisite: ANTH 251 or consent of instructor. LEC

GEOL 991 Seminar in: (1-5). A review of the principles of the geological sciences. An introduction to invertebrate paleontology, invertebrate paleontology, ground-water, geochemistry, stratigraphy, sedimentation, microfacies, evolution, mineralogy, structural geology, and geophysics. Several may be taken concurrently. May be taken more than one semester. LEC

GEOL 999 Doctoral Dissertation (1-12). THE
Germanic Languages and Literatures

Chair: William Keel, german@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 2080
Lawrence, KS 66045-7594, www2.ku.edu/~germanic, (785) 864-4657
Graduate Director: Leonie Marx, 2076 Wescoe Hall, (785) 864-9177
Professors: Baron, Keel, Marx
Professors Emeriti: Dick, Huelsbergen, Maurer
Associate Professors: Holmes, Vanchena
Associate Professor Emeritus: Fullenwider
Assistant Professors: Brown, Vyatkina

The department offers a full graduate program leading to the M.A. and Ph.D. degrees. In the Ph.D. program, a student may elect one of four specializations: German literature, Germanic philology, German applied linguistics, or Germanic linguistics.

Admission

In addition to general requirements, a student should have the equivalent of an undergraduate German major at KU.

Submit your application online at www.grad.ku.edu. Send all other requested application materials to:

The University of Kansas
Department of Germanic Languages and Literatures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2080
Lawrence, KS 66045-7594

M.A. Degree Requirements

Nonthesis Degree*

1. Thirty credit hours of graduate work in German. This requirement may be reduced for students in high standing. GERM 701, GERM 711, GERM 721, and at least one literature course from each of the following periods:
   • Age of Goethe or Romanticism,
   • 19th century,
   • 20th century,
   or, in exceptional cases, equivalent seminars (GERM 960-GERM 966) must be included in the minimum. Equivalent courses may be substituted with the approval of the departmental graduate committee. The remaining 12 hours may be taken from departmental course offerings in literature, philology, and linguistics at the graduate level.

2. A reading knowledge of Danish, Dutch, or French.

3. A written and oral examination.

*New teaching assistants normally must enroll in GERM 800 concurrently with their first semester of teaching.

Thesis Degree*

1. Thirty credit hours of graduate work in German, of which 3 hours must be in GERM 899 Master’s Thesis. This requirement may be reduced for students in high standing. GERM 701, GERM 711, GERM 721, and at least one literature course from two of the following literary periods:
   • Age of Goethe or Romanticism,
   • 19th century,
   • 20th century,
   or, in exceptional cases, equivalent seminars (GERM 960-GERM 966) must be included in the minimum. Equivalent courses may be substituted with the approval of the departmental graduate committee. The remaining 9 hours may be taken from departmental course offerings in literature, philology, and linguistics at the graduate level.

2. A reading knowledge of Danish, Dutch, or French.


4. A written and oral examination.

*New teaching assistants normally must enroll in GERM 800 concurrently with their first semester of teaching.

Ph.D. Degree Requirements

In addition to the general requirements for the Doctor of Philosophy degree concerning research skills, the oral comprehensive examination, the dissertation, and the final examination, a student must meet the following specific departmental requirements:

1. Normally a minimum of 27 credit hours (excluding GERM 999 Doctoral Dissertation) beyond that required for the M.A. Three courses should be in the student’s specialization; six courses should be in other areas. Students in philology or linguistics must have two courses in post-1400 literature; students in post-1400 literature must have two courses in philology or linguistics.

2. A reading knowledge of French and another modern language, Latin, or Greek. Students specializing in medieval philology or older literature must select Latin as the second language for reading knowledge.

3. At least one semester of half-time teaching or the equivalent (normally GERM 800 is required concurrently with the first semester of teaching).

4. A three-part written departmental preliminary examination. To be admitted to the Ph.D. oral comprehensive examination, the candidate must have passed all parts of the Ph.D. preliminary examination.

Max Kade Center for German-American Studies

Director: Frank Baron, german@ku.edu, Sudler House, (785) 864-7343 or 7342

The center collects materials on German culture in the United States and fosters scholarship in German-Americana, especially dialect, literary, and interdisciplinary cultural studies, including dissertation research. The materials—10,000 books, as well as magazines, journals, and other writings—were produced or brought to this country by German-speaking immigrants and exiles from Nazi Germany. Among the holdings are materials from the Turner societies of New York, Milwaukee and Lawrence. The center sponsors lectures, symposia, workshops, and conferences, publishes the Yearbook of German-American Studies for the Society of German-American Studies, and houses the Linguistic Atlas of Kansas German Dialects.

Special Library Collections in German

The Rainer Maria Rilke Collection comprises more than 1,200 volumes, including all first editions, critical editions, translations, bibliographies, criticism, and various materials on the reception of his works.

The Engel German Library is an endowed departmental library housing an expanding collection of reference works, standard editions, basic secondary literature, current German periodicals, newspapers and magazines, as well as tape recordings, records, slides, and audio-visual equipment.

German Courses

GERM 504 German Poetry (3).
GERM 568 German Literature from 1750-1805 (3).
GERM 572 German Literature from 1805-1890 (3).
GERM 576 German Literature from 1890 to the Present (3).
GERM 588 Deutsche Kulturkunde I (3).
GERM 590 Deutsche Kulturkunde II (3).
GERM 604 Introduction to the Germanic Languages (3).
GERM 608 German Literature from the Beginning to 1750 (3).
GERM 614 Course in Representative Authors: _____ (3).
GERM 616 Topics in German Literature: _____ (3).
GERM 618 Topics in German Language and Linguistics: _____ (3).
GERM 620 Topics in German Culture and Folklore: _____ (3).
GERM 626 Diplomatic Usage in Modern Colloquial and Literary German (3).
GERM 628 Translation into German (Advanced) (3).
GERM 630 Advanced German Grammar (3).
GERM 632 Deutscher Stil (Advanced German Composition) (3).
GERM 653 Investigation and Conference: _____ (1-3).
GERM 681 Language Teaching for Oral Proficiency (1).

GERM 701 Introduction to the Study of Literature (3). Introduction to methods of literary research and presentation of seminar papers. Exercises in the use of basic guides to the study of German language and literature, in the documentation of scholarly research, and in the writing of interpretive essays, based on reading and discussion of selected works from different periods of the departmental "Basic Reading List." LEC

GERM 702 Methods of Literary Criticism (3). Differentiation of critical methods. Exercises in textual criticism. LEC

GERM 704 German Stylistics (3). Stylistic analysis of literary texts; writing in German. LEC

GERM 705 German Phonetics (3). A systematic study of German phonetics. Prerequisite: Graduate standing or consent of instructor. LEC

GERM 710 Workshop for M.A. Students (1). Discussion of policies in the M.A. program, examinations, thesis proposals, writing of theses, grant proposals, conference presentations, publications of scholarship, and entrance into the academic job market. Required of all M.A. students in the first year in the program. Does not count toward completion of 30 hours of course work for the M.A. IND

GERM 711 History of the German Language (3). A comprehensive introduction to the basic concepts of German philology and various aspects of historical linguistics, including the nature of language and linguistic change, discoveries of the pioneer philologists of the 19th century regarding the prehistory of German, and the beginnings of a national German language. LEC

GERM 712 The Structure of Modern Standard German (3). A descriptive study of the phonetics/phonology and grammar of contemporary standard German. Special emphasis on problems of teaching German to English-speaking students. LEC

GERM 716 Topics in German Literature: _______ (3). Intensive study of a selected topic in German literature. May be repeated. Offered only in conjunction with GERM 616 when taught by a Max Kade Distinguished Visiting Professor. Graduate students will be assigned additional work. LEC

GERM 721 Introduction to Middle High German Literature (3). The elements of Middle High German as required for reading medieval texts in the original. Intensive reading and literary study of at least one text in full. LEC

GERM 722 Early Modern Period (3). Reading and discussion of major literary works of the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 734 Age of Goethe (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 736 Post-Romantic 19th Century (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 738 Twentieth Century (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 751 Special Topics in Culture: _______ (3). Intensive study of a selected topic in German culture. May be repeated. LEC _______ (1-3). To be taken only in exceptional cases. Permission of the instructor who will supervise the student’s work is required. RSH

GERM 754 Studies in Humanism, Renaissance, and Reformation Literature: _______ (3). LEC

GERM 755 Studies in Baroque Literature: _______ (3). LEC

GERM 756 Studies in Enlightenment Literature: _______ (3). LEC

GERM 760 Studies on Writers of the Age of Goethe: _______ (3). LEC

GERM 762 Studies in Romanticism: _______ (3). LEC

GERM 764 Studies in the Literature of the 19th Century: _______ (3). LEC

GERM 766 Studies in Literature since 1890: _______ (3). LEC

GERM 800 Seminar: Teaching German as a Second Language (3). Introduction to selected aspects of second-language acquisition, foreign-language pedagogy, and contrastive grammar, with the major concentration on practical guidance in teaching elementary German, in test preparation and grading, and in the use of equipment. LEC

GERM 801 Practicum for GTAs (1). Discussion of matters relating to the teaching of German in specific courses. Required of all GTAs in each semester of teaching, unless enrolled in GERM 800. Does not count toward completion of 30 hours of course work for the M.A. or 27 hours of course work for the Ph.D. IND

GERM 822 Survey of Medieval German Literature (3). Text-oriented study of the literature of 750-1500 with selected readings in the original and in translation. Prerequisite: GERM 721. LEC

GERM 823 Readings in Middle High German Epics: _______ (3). Reading and literary analysis of one of the following: Nibelungenlied, Erec and Iwein, Tristan, Parzival. Prerequisite: GERM 721. LEC

GERM 824 Readings in Middle High German Lyrics (3). Reading and literary analysis of one of the following: Minnesangs Fruehling, Walther von der Vogelweide. Prerequisite: GERM 721. LEC

GERM 851 Studies in Germanic Philology: _______ (3). Topics to be announced. Emphasis on studies in etymology, semantics, vocabulary, medieval dialects, linguistic theories. Prerequisite: GERM 711. LEC

GERM 852 Special Topics in Literature: _______ (3). Prerequisite: GERM 701. LEC

GERM 854 Studies in the Works of: _______ (3). In-depth study of the work of a major author in German literature. Prerequisite: GERM 701. LEC

GERM 855 Introduction to German Applied Linguistics (3). Introduction to theories and topics in German applied linguistics. SEM

GERM 860 Introduction to Modern German Dialects (3). Introduction to modern German dialects, methods of dialect research and aspects of linguistic assimilation and loss as well as a survey of German-American dialects. Prerequisite: Permission of instructor required. SEM

GERM 899 Master's Thesis (1-6). THE

GERM 900 Workshop for Ph.D. Students (1). Discussion of policies in the Ph.D. program, research specializations, examinations, dissertation proposals, writing of dissertations, grant proposals, conference presentations, publication of scholarship, and entrance into the academic job market. Required of all Ph.D. students in the first year in the program. Does not count toward completion of 27 hours of course work for the Ph.D. LEC

GERM 901 Gothic (3). Reading of selected Gothic texts. Historical and descriptive study of Gothic phonology and grammar, with an introduction to comparative Germanic grammar. Prerequisite: GERM 711. LEC

GERM 902 Old Saxon (3). Introduction to the elements of its grammar and discussion of its role in the German family of languages. Selected readings from the Heland and discussion of the entire work. Prerequisite: GERM 711. LEC

GERM 903 Old High German (3). Reading and discussion of selected prose texts and poetic documents; phonological and grammatical features of the Old High German dialects. Prerequisite: GERM 711. LEC

GERM 951 Seminar in Germanic Philology: _______ (3). LEC

GERM 952 Seminar in Medieval German Literature: _______ (3). LEC

GERM 953 Investigation and Conference: _______ (1-3). To be taken only in exceptional cases. Permission of the instructor who will supervise the student’s work is required. RSH

GERM 954 Seminar in Humanism, Renaissance, and Reformation Literature: _______ (3). LEC

GERM 955 Seminar in Baroque Literature: _______ (3). LEC

GERM 956 Seminar in Enlightenment Literature: _______ (3). LEC

GERM 960 Seminar on Writers of the Age of Goethe: _______ (3). LEC

GERM 962 Seminar in Romanticism: _______ (3). LEC

GERM 964 Seminar in the Literature of the 19th Century: _______ (3). LEC

GERM 966 Seminar in Problems in Literature Since 1890: _______ (3). LEC

GERM 967 Seminar in Special Topics: _______ (3). LEC

GERM 999 Doctoral Dissertation (1-9). THE

Scandinavian Courses

SCAN 560 Scandinavia Past and Present (3).

SCAN 570 Scandinavian Life and Civilization (3).

SCAN 660 Representative Authors in English (3).

SCAN 661 Topics in Scandinavian Languages and Linguistics: _______ (3). SCAN 753 Investigation and Conference: _______ (1-3). Independent study and directed reading on special topics. Permission of the instructor is required. RSH

SCAN 906 Old Norse (3). Introduction to the grammar and reading of the prose literature of the “saga-age” (1100-1350). Varied selections from the literature provide the context in which the language is discussed. LEC

SCAN 907 Readings in Old Norse Literature (3). Intensive discussion of a single longer saga or several shorter works, or a combination of these on a single theme. Dialectal differences between W. Norse and older Germanic dialects will be noted. Prerequisite: SCAN 906. LEC
Gerontology

Director: David J. Ekerdt
Dole Human Development Center, 1000 Sunnyside Ave., Room 3090
Lawrence, KS 66045-7561, www2.ku.edu/~kuger, (785) 864-4130
Graduate Adviser: Susan J. Kemper, skemper@ku.edu, (785) 864-4130

Core Faculty: Ekerdt, Grobe, Hummert, Johnson, Kemper, LaPierre
Affiliated Faculty: Atchley (Psychology), Burns (Neurology), Chapin (Social Welfare), Clair (Music), Crawford (Anthropology), Deboeck (Psychology), Fawcett (Applied Behavioral Science), Ferguson (Speech-Language-Hearing), Fox (Health Policy and Management), Gallagher (Health, Sport, and Exercise Science), Hamburg (Dance), Hamilton (Psychology), Jackson (Hearing and Speech), Koenig (Social Welfare), Kunkel (Communication Studies), Little (Psychology), Luchies (Mechanical Engineering), D. Marquis (Philosophy), J. Marquis (Institute for Life Span Studies), McDowd (Occupational Therapy), McKenzie (Law), Michaelis (Pharmacology and Toxicology), Moore (Architecture), Nelson-Becker (Social Welfare), Nudo (Molecular and Integrative Physiology), Shireman (Preventive Medicine and Public Health), Vitevitch (Psychology), Williams (Nursing), Wilson (Mechanical Engineering), Zhang (Communication Studies), Zimmerman (Sociology)

Graduate study in gerontology at KU consists of two interdisciplinary programs, (1) Master of Arts and Doctor of Philosophy degrees in gerontology, and (2) a Graduate Certificate in gerontology. They are administered through the Gerontology Center, a component of the Schiefelbusch Institute for Life Span Studies.

M.A. and Ph.D. Program

The Doctor of Philosophy degree in gerontology was approved by the Kansas Board of Regents during the 1996-97 academic year. KU is one of the few universities nationwide offering the Ph.D. in gerontology. KU’s gerontology graduate program is unique in that it is an interdisciplinary research degree emphasizing social and behavioral gerontology. Faculty affiliated with the program include members of the College of Liberal Arts and Sciences, including the School of the Arts; and the Schools of Allied Health; Architecture, Design and Planning; Education; Engineering; Law; Medicine; Music; Nursing; Pharmacy; and Social Welfare. The graduate program in gerontology gives students a broad, advanced educational experience in gerontology. It provides a common focus for all students, yet allows each student to design a course of study most appropriate for her or his career objectives. Courses give students a multidisciplinary perspective on the issues and problems of aging, built on a strong foundation in basic research on aging. The program prepares students for academic and research careers in gerontology, as well as for professional careers in private and public institutions and agencies providing services to older individuals. Students seeking a terminal M.A. in gerontology are not admitted; the M.A. is offered only to those pursuing a Ph.D.

Application and Admission. Any student who has completed at least a B.A. or B.S. degree at an accredited institution of higher education may apply to the Ph.D. program. Required application materials include a résumé, a personal statement of professional and educational goals in gerontology, one copy of all undergraduate and graduate transcripts, list of all courses taken that are relevant to gerontology, three letters of recommendation, and scores from the Graduate Record Examination. Applicants whose first language is not English must submit proof of proficiency in English. GRE and other scores should be from the last two years. Further information is available from the graduate adviser or on the program’s Web site.

Submit your application online at www.graduate.ku.edu. Send all application materials to

The University of Kansas
Gerontology Program, Admissions Committee
Dole Human Development Center
1000 Sunnyside Ave., Room 3090
Lawrence, KS 66045-7561.

Program Requirements. For the Ph.D., the student must complete all general degree requirements, including residence, research skills, comprehensive oral examination, preparation of a dissertation, and the final oral examination.

Each student designs his or her own curriculum with the assistance of a support committee of three gerontology faculty members. All students are expected to acquire multidisciplinary training in gerontology by taking courses in the sociology, psychology, and biology of aging.

Students may enter the program with an acceptable master’s degree from KU or another institution. The admissions committee reviews master’s-level preparation for doctoral-level research. An acceptable level of preparation includes basic training in statistics, program assessment, or policy analysis and completion of an empirical research study or thesis.

Students entering the program without an acceptable master’s degree must complete the M.A. in gerontology before the Ph.D. The requirements for the M.A. in gerontology are as follows:

• Gerontology proseminar
• Six hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology)
• Twelve hours of supplemental courses in gerontology and related fields
• Six hours of basic statistics courses
• Three hours of methodology
• Six hours of thesis credit

For students who enter the program with master’s degrees or who complete the M.A. in gerontology, minimum requirements for the Ph.D. are as follows:

• Gerontology proseminar
• At least 6 hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology)
• At least 12 hours of additional supplemental courses in gerontology and related fields
• Six hours of advanced statistics courses
• Six additional hours of methodology
• Completion of written and oral comprehensive examination
• Six hours of dissertation credit, completion of dissertation, and final oral examination

A list of courses meeting requirements in gerontology, statistics, and methodology is available from the graduate adviser.

Evaluation of Satisfactory Performance. The gerontology proseminar and core courses should be completed during the first two semesters. Students normally are expected to complete the M.A. degree in two years. The maximum time limit for completing all requirements for the M.A. degree is three years. Students normally are expected to complete the Ph.D. within three years of entering the program or of completing the M.A. The maximum time limit for completing all requirements for the doctoral degree is eight years after admission to the doctoral program with an acceptable master’s degree or after completion of the M.A. degree in gerontology. Students who complete the M.A. degree in gerontology at KU and subsequently begin doctoral studies have a total enrolled time of 10 years to complete both degrees.
Written Preliminary Examination. Upon completion of the M.A., a major portion of the course requirements, and the research skills requirement, each student must pass a written preliminary examination. This examination covers two content areas reflecting the student’s area of concentration and integrates theoretical and methodological issues in gerontology.

Comprehensive Oral Examination. The comprehensive oral examination covers gerontology. The examination can take one of five forms: (1) a defense of the written preliminary examination, (2) a defense of a completed research project, (3) a defense of a prospectus for a future research project, including the dissertation, (4) a discussion of a major review paper written by the student, (5) a review of a research grant proposal and a simulated site visit defense of the proposal.

Dissertation Preparation and Final Oral Examination. Upon passing the comprehensive oral examination, the student becomes a candidate for the doctorate. Graduate Studies designates a dissertation committee based on the recommendation of the program. The dissertation committee includes at least three members of the gerontology program faculty.

After passing the comprehensive oral examination, the candidate must be continuously enrolled until all degree requirements have been met. When the completed dissertation has been accepted by the committee, but before it has been bound, and all degree requirements have been met, the program requests the final oral examination to be scheduled, allowing a minimum of two weeks to verify the requirements and publicize the examination. At least five months must elapse between successful completion of the comprehensive oral examination and the final oral examination.

Foreign Language or Other Research Skills Requirement. Doctoral students must demonstrate competence in a research skill “distinct from, but strongly supportive of, the dissertation.” The program advisory committee establishes requirements for research skills, including the following options: (1) demonstrated proficiency in a spoken language other than English that is relevant to research in gerontology; (2) demonstrated reading proficiency in two languages other than English that are relevant to research in gerontology; (3) competence in both computer programming and computer applications with relevance to research in gerontology; (4) a record of professional experience, publication, or presentation at professional meetings or a record of course work in a substantive area such as statistics beyond that required to satisfy the master’s or doctoral degree requirements in gerontology.

Research Experience. All students are expected to be continuously involved in research under the supervision of the graduate adviser and support committee. Research involvement includes the design, execution, and dissemination of research on aging.

Gerontology Certificate Program
The graduate certificate in gerontology allows students to combine a research interest in aging with graduate study in an academic department. Completion of the certificate enables students to apply specialized knowledge of the social, psychological, demographic, and biomedical aspects of aging to their professional disciplines. The certificate represents an additional credential for graduate students from a variety of academic fields who are preparing for careers in research and teaching or professional practice.

Admission. Any KU student in a degree-granting department or school at the master’s or doctoral level is eligible to apply for admission to the Graduate Certificate Program in Gerontology. Nondegree-seeking students also may apply. Further information about the Gerontology Certificate Program and the application process is available at wvaro2.ku.edu/~kugeron or by writing to the graduate adviser: skumper@ku.edu.

Requirements. A detailed description is available on the Gerontology Center’s Web site. Students complete 15 hours of course work including a research practicum or field placement. The certificate enables students to integrate knowledge of gerontology into their own academic disciplines or professional training. Course work includes the gerontology seminar, courses in the biology of aging, the psychology of aging, communication and aging, and social gerontology, as well as gerontology electives. These requirements are based on the recommendations of the Association for Gerontology in Higher Education for graduate certificate programs.

Courses
Cooperating departments and schools list courses related to aging. See the Web site for course listings from recent semesters.

Global Indigenous Nations Studies
Director: John Hoopes
Lippincott Hall, 1410 Jayhawk Blvd., Room 6
Lawrence, KS 66045-7537
www.indigenous.ku.edu, (785) 864-2660, fax: (785) 864-0370
Professor: Mihesuah
Associate Professors: O’Brien, Pierotti, Yellow Bird
Assistant Professor: Fitzgerald
The Global Indigenous Nations Studies Program offers an interdisciplinary master’s degree designed to prepare graduate students for academic careers; to conduct basic and applied scholarly research from a cross-cultural perspective; to develop innovative theories, methodologies, and research tools appropriate for Indigenous cultures; and to prepare candidates for assuming leadership and policy-making roles in Indigenous communities, higher education, and in state, national, and international organizations. Global Indigenous Nations Studies collaborates with the Tribal Law and Government Center in the KU School of Law and Haskell Indian Nations University. The program faculty consists of both core and affiliated faculty who represent a broad range of interdisciplinary and international skills and interests.

Admission
Regular admission is granted to qualified applicants who hold the baccalaureate degree or equivalent (for international students) and whose undergraduate grade-point averages are B or above (3.0 on a 4.0 scale). Applicants who do not meet these criteria but whose records and recommendations suggest likely success may be admitted on probationary or provisional status. GINSP has several application deadlines. January 15 is the deadline to be considered for admission and nomination for a university scholarship or fellowship. March 15 is the deadline for admission and consideration for internal GINSP scholarships. A rolling deadline is allowed for applications to be received on a continuous basis.

Applications will not be considered until all the following materials have been submitted:
• Domestic or international online graduate application
• Application fee (nonrefundable check payable to the University of Kansas, see Admission in the General Information chapter of this catalog)
• Graduate Record Examination scores (international students must submit Test of English as a Foreign Language scores.)
• One official transcript from each previously attended college or university
• One two- to three-page personal statement
• Résumé
Global Indigenous Nations Studies

- Three letters of recommendation and Graduate Studies letter of recommendation form
- Writing sample (research paper, etc.)
Submit your application online at www.graduate.ku.edu.
Send all other requested application materials to
The University of Kansas
Global Indigenous Nations Studies
Lippincott Hall, 1410 Jayhawk Blvd., Room 6
Lawrence, KS 66045-7537

M.A. Degree Requirements and Concentrations

Students pursuing the M.A. in Global Indigenous Nations Studies must successfully complete a minimum of 30 graduate credit hours that reflect an approved area of specialization chosen in consultation with a faculty committee chaired by a faculty adviser in the program.

Core Curriculum. All GINS students must take the following required core courses (9 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GINS 800</td>
<td>Research Methods and Indigenous Peoples</td>
<td>3</td>
</tr>
<tr>
<td>GINS 801</td>
<td>Indigenous Peoples of the World</td>
<td>3</td>
</tr>
<tr>
<td>GINS 803</td>
<td>Introduction to Indigenous Nations Graduate Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Core courses provide proficiency in graduate-level research and writing, knowledge of issues affecting Indigenous Peoples in different parts of the world, and specific methodologies relevant to conducting original scholarship and training concerning Indigenous Peoples in a global context. In addition to the core courses, students must enroll in 9 credit hours of specialized electives and 9 credit hours of additional electives, all in courses at the graduate level (500 or above). Approved courses may be taken in different departments and programs, including English; history; geography; Latin American studies; women, gender, and sexuality studies; East Asian languages and cultures; Russian, East European, and Eurasian studies; African and African-American studies; museum studies; ecology and evolutionary biology; religious studies; political science; psychology; anthropology; and law. Some degree candidates may be required to undertake a supervised apprenticeship.

Thesis/Nonthesis Options. Students must complete a master’s thesis or (with special approval) a nonthesis master’s project and enroll in at least 3 credit hours to complete this requirement. Both the master’s thesis and the nonthesis master’s project consist of original research that the student completes under the supervision of a faculty committee. Students must defend their research in an oral examination that tests them on relevant knowledge and faculty committee. Students must defend their research in an oral examination that tests them on relevant knowledge and critical thinking/reading/writing skills, and their ability to explain the importance of their work in the context of the goals of the Global Indigenous Nations Studies Program.

World Indigenous Graduate Exchange

WIGE is a graduate student exchange program established among KU, the University of Newcastle, Australia; and the University of Oulu, Finland. For more information, contact the Global Indigenous Nations Studies office.

Financial Aid

The program may nominate outstanding students for KU graduate fellowships and awards. Consideration requires submission of an application by January 15. GINSP offers a few scholarships for excellence in academic work. Consideration requires the submission of all application materials and also an additional original scholarship essay by March 15.

Global Indigenous Nations Studies Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GINS 504</td>
<td>Topics in Indigenous Nations Studies</td>
<td>3</td>
</tr>
<tr>
<td>GINS 510</td>
<td>Indigenous Women and Activism</td>
<td>3</td>
</tr>
<tr>
<td>GINS 530</td>
<td>Indigenous Food and Health</td>
<td>3</td>
</tr>
<tr>
<td>GINS 600</td>
<td>Research Methods and Indigenous Peoples</td>
<td>1-3</td>
</tr>
<tr>
<td>GINS 601</td>
<td>Indigenous Peoples of the World</td>
<td>3</td>
</tr>
<tr>
<td>GINS 602</td>
<td>Indigenous Decolonization and Empowerment</td>
<td>3</td>
</tr>
<tr>
<td>GINS 603</td>
<td>Introduction to Indigenous Nations Graduate Studies</td>
<td>3</td>
</tr>
<tr>
<td>GINS 612</td>
<td>Native American Oppression, Resistance, and Liberation</td>
<td>3</td>
</tr>
<tr>
<td>GINS 613</td>
<td>Issues Facing Indigenous Peoples</td>
<td>3</td>
</tr>
<tr>
<td>GINS 614</td>
<td>Decolonizing Narratives</td>
<td>3</td>
</tr>
<tr>
<td>GINS 670</td>
<td>Indigenous Peoples’ Health Status, Beliefs, and Behaviors</td>
<td>3</td>
</tr>
<tr>
<td>GINS 673</td>
<td>Environmental Justice</td>
<td>3</td>
</tr>
<tr>
<td>GINS 800</td>
<td>Research Methods and Indigenous Peoples</td>
<td>1-3</td>
</tr>
<tr>
<td>GINS 801</td>
<td>Indigenous Peoples of the World</td>
<td>3</td>
</tr>
<tr>
<td>GINS 802</td>
<td>Indigenous Decolonization and Empowerment</td>
<td>3</td>
</tr>
<tr>
<td>GINS 803</td>
<td>Introduction to Indigenous Nations Graduate Studies</td>
<td>3</td>
</tr>
<tr>
<td>GINS 804</td>
<td>Special Topics:</td>
<td>1-3</td>
</tr>
<tr>
<td>GINS 805</td>
<td>American Indian Leadership</td>
<td>3</td>
</tr>
<tr>
<td>GINS 806</td>
<td>Directed Readings</td>
<td>1-3</td>
</tr>
<tr>
<td>GINS 807</td>
<td>Internship in Indigenous Nations Studies</td>
<td>3-6</td>
</tr>
<tr>
<td>GINS 809</td>
<td>Indigenous Women: Gender and Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>GINS 810</td>
<td>Indigenous Women and Activism</td>
<td>3</td>
</tr>
</tbody>
</table>

KU’s Global Indigenous Nations Studies is the only graduate program in the United States to encourage interdisciplinary study of all Indigenous peoples in the Western Hemisphere.

Global Indigenous Nations Studies draws on the resources of KU’s Tribal Law and Government Center and the Center of Latin American Studies.

The World Indigenous Graduate Exchange is a graduate student exchange program involving KU, the University of Newcastle, Australia; and the University of Oulu, Finland.
throughout the world. Legal, legal, political, and socio-economic issues confronting Indigenous societies (3). A discussion of what constitutes a record and how to manage records at the business or government level. Train students in hands-on records management techniques, policies, developing a records management program and how to prepare a funding campaign. The students will produce a research paper at the end of the semester. LEC

GINS 824 Federal Indian Law (2.5-3). Addresses the law and policy of the United States regarding Indian nations and their members. Issues include the origins and contours of federal plenary power over Indian affairs, the scope of inherent tribal sovereignty, the limits of state power in Indian country, civil and criminal jurisdiction, and gaming. (Same as LAW 914) Prerequisite: Permission from instructor. LEC

GINS 830 Indigenous Food and Health (3). Investigates the historic diets of Indigenous peoples, the effects of crops, hunting, and foraging methods, food preservation, and seed preservation. Traces through history the colonial policies and ideologies that caused the cultures to alter their ways of eating, resulting in unprecedented modern health problems. Will offer traditional cultural strategies for health recovery. LEC

GINS 862 Indigenous Archives (3). A discussion of what constitutes an archive, including the theory and methodology of archaeology, and the role of archives as decolonizers. Can decolonizing methodologies be applied to such texts? How do such texts contribute to and strengthen Indigenous political, intellectual, cultural, visual and rhetorical sovereignty? An overview will be presented from Indigenous literature, films and documentaries from North America, the Pacific, Australia, and New Zealand. LEC

GINS 824 Federal Indian Law (2.5-3). Addresses the law and policy of the United States regarding Indian nations and their members. Issues include the origins and contours of federal plenary power over Indian affairs, the scope of inherent tribal sovereignty, the limits of state power in Indian country, civil and criminal jurisdiction, and gaming. (Same as LAW 914) Prerequisite: Permission from instructor. LEC

GINS 830 Indigenous Food and Health (3). Investigates the historic diets of Indigenous peoples, the effects of crops, hunting, and foraging methods, food preservation, and seed preservation. Traces through history the colonial policies and ideologies that caused the cultures to alter their ways of eating, resulting in unprecedented modern health problems. Will offer traditional cultural strategies for health recovery. LEC

GINS 862 Indigenous Archives (3). A discussion of what constitutes an archive, including the theory and methodology of archaeology, and the role of archives as decolonizers. Can decolonizing methodologies be applied to such texts? How do such texts contribute to and strengthen Indigenous political, intellectual, cultural, visual and rhetorical sovereignty? An overview will be presented from Indigenous literature, films and documentaries from North America, the Pacific, Australia, and New Zealand. LEC

GINS 866 Exhibition Cultivating (3). A discussion of how museums and exhibits can be used to cultivate Indigenous community and government and the importance of Indigenous cultures to interpret their stories themselves. The class will also look at how different nations view the display and handling of their belongings and what kinds of personal belongings can be handled and displayed. LEC

GINS 865 Grant Writing and Fundraising (3). A discussion of how to develop a grant writing and fundraising plan for a tribal project. Includes how to develop an idea or project and how to prepare a funding campaign. The students will produce a fundraising event and work on the various parts of an actual grant as the final class activity that will be designed to bring in funding to support KU Global Indigenous Nations Studies Program. LEC

GINS 866 Indigenous Museum Management (3). A discussion of the community models of museum management, including museum administration, professional positions within a museum, museum exhibits, public education programs, security, and disaster planning. The course will compare and contrast museum management in European/American museums and tribal museums and how these management styles affect collection policies, exhibit policies, traditional care of collections, sacred and ceremonial item handling and display, NACPRA and repatriation, and oral histories. LEC

GINS 867 Indigenous Records Management (3). A discussion of what constitutes a record and how to manage records at the business or government level. Train students in hands-on records management techniques, developing a records retention schedule, and how to plan and design a records management program for records pertaining to Indigenous nations. LEC

GINS 868 Indigenous Records Management II (3). A discussion of what constitutes a record and how to manage records at the business or government level. This is a second level of records management leading to preparation for taking the certification examination. LEC

GINS 869 Traditional Care of Collections (3). A discussion of on traditional care issues of handling and preserving of Indigenous belongings. The class will compare the methods of traditional care at tribal museums vs. conservation of Native items in mainstream museums. LEC

GINS 870 Indigenous Peoples’ Health Status, Beliefs, and Behaviors (3). This course is designed to explore the health status, beliefs, and behaviors of particular Indigenous cultures. The course examines the role of thinking, attitudes, and perceptions of health, various social and economic factors on health status, and health practices. The course will focus on the groups of the Maori of New Zealand, First Nations in Canada, Palestinian people of the Middle East, American Indians, and Indigenous Australians. LEC

GINS 871 Community Health and Development (3). This course extends knowledge and skills for assessing issues in community health and development (e.g., substance abuse, adolescent pregnancy, child and youth development, prevention of violence). Students will learn core competencies such as analyzing community problems and goals, strategic planning, intervention, and evaluation, and then apply these skills to issues that matter to them and to the communities they serve. (Same as ABSC 710.) LEC

GINS 873 Environmental Justice (3). An examination of the impact of environmental justice and security in Indigenous communities throughout the world with a focus on tactics and strategies that incorporate Indigenous perspectives in responses and mitigation schemes. A survey of mining, dumping and storage of toxic and radioactive waste activities as related to Indigenous peoples. Case study analyses of economic, military and mining interests contrasted with perspectives emerging from cultural traditions and beliefs of Indigenous peoples and communities. LEC

GINS 874 Natural Resource Management: Indigenous Perspectives (3). An examination of resource management issues in Indigenous communities throughout the world with a focus on tactics and strategies that incorporate Indigenous perspectives in the management schemes. Case study analyses of management techniques derived from European-based science with Indigenous traditions and beliefs. LEC

GINS 875 Native and Western Views of Nature (3). A comparison of the attitudes and perspectives towards the natural world developed by different cultural traditions. A review of western attitudes and also the traditional ecological knowledge of Indigenous peoples toward management of natural resources, non-human animals, and the natural world. LEC

GINS 876 Comparative Law (2.5-3). A general introduction to and comparison of major legal systems of the world, with special emphasis given to how those systems reflect differing cultural values in addressing common legal questions. A major goal of the course is to deepen the students’ understanding of law and practice in the United States and to broaden their perspective of law beyond the boundaries of the common law systems. (Same as LAW 879) Prerequisite: Permission from instructor. LEC

GINS 877 Public Lands and Natural Resources (2.5-3). Devoted to the law and legal systems that govern the classification and use of one-third of America’s land mass. Includes a survey of the acquisition and disposition of the public domain; general federal statutes and doctrines that affect public land law; and different forms of federal lands classifications, including national parks, scenic rivers, and grazing lands. (Same as LAW 975) Prerequisite: Permission from instructor. LEC

GINS 878 Regulations of Air and Water Pollution (2.5-3). A general introduction to national environmental policy and environmental litigation problems, focusing on current issues involving government regulation of activities that generate water and air pollution. Coverage of water pollution typically will include control of point sources and oil spills, while coverage of air pollution will include control of stationary and mobile sources, acid deposition, and introduction to transboundary problems such as the greenhouse effect and global warming. (Same as LAW 980) Prerequisite: Permission from instructor. LEC

GINS 879 Water Law (2.5-3). A study of water rights including the riparian and prior appropriation doctrines for surface water, and the various doctrines for groundwater. Private and public water distribution organizations, and special water districts. Water pollution control. Interstate conflicts over water resources. Federal government involvement in water distribution including federal powers and programs. Indian and reserved rights. Kansas water law. (Same as LAW 995.) Prerequisite: Permission from instructor. LEC

GINS 882 Native American Natural Resources (2.5-3). This course provides a detailed examination of the confluence of water law, environmental protection, and subsurface property rights. While not a prerequisite, it is recommended that students take Federal Indian Law before enrolling in this course. (Same as LAW 967.) Prerequisite: Permission from instructor. LEC

GINS 883 Sovereignty, Self-Determination, and Indigenous Nations (2-3). Examines legal, governmental, political, social, cultural, and economic issues associated with American Indian tribal sovereignty and self-determination. Includes the source and scope of tribal sovereignty; the threats to tribal sovereignty; and the methods by which tribal sovereignty can be strengthened and revitalized. (Same as LAW 987.) Prerequisite: Permission from instructor. LEC


Greek
See Classics.

Haitian
See African and African-American Studies.

Health Policy and Management
See the School of Medicine chapter of this catalog.
History

Chair: Paul Kelton
Wescoe Hall, 1445 Jayhawk Blvd., Room 3650
Lawrence, KS 66045-7594, www.history.ku.edu, (785) 864-3569
Director of Graduate Studies, Luis Corteguera,
3630 Wescoe Hall, (785) 864-9469
Professors: Bailey, J. Clark, Epstein, Kuznesof, Levin, Lewis, Sivan, Tsutsui, Wilson, Worster
Associate Professors: Brooks, K. Clark, Corteguera, DeKosky, Earle, Greene, Kelton, Lewin, MacGonagle, Moran, Napier, Rath, Rosenthal, Sax, Vicente
Assistant Professors: Cushman, Dorman, Jahanbani, Jenkins, Lu, Nelson, Tuttle, Warren, Weber, Wood

Fields of Study
The department has the following established fields, each with subdivisions:
- Ancient/Medieval History
- Modern European History
- Great Britain and the Empire
- Russian and East European History
- East Asian History
- Latin American History
- U.S. History
- Native American History
- History of Science and Medicine
- Environmental History
- Military/International History
- History of Women and Gender

Students may be permitted to pursue programs in additional fields appropriate to the expertise of the faculty, with the approval of the department’s graduate board.

Application Deadline
The application deadline for admission and financial aid is December 1, to begin the program the following fall semester.

Admission
The department accepts applications for both the M.A. and the Ph.D. Students who currently have only the B.A. but plan to study for the Ph.D. should apply for admission to the M.A. program.

Applicants are not required to have a B.A. in history to be eligible for admission. Because scholarly work in many fields of historical study depends on competence in one or more foreign languages, the department encourages applicants to have a reading competence in at least one foreign language before enrolling.

For complete information on required materials, visit the department Web site, www.history.ku.edu, and select Graduate Program. The department requires a completed application checklist, statement of purpose, résumé or curriculum vitae, and writing sample. All graduate applicants must take the Graduate Record Examination general test and have a copy of the results forwarded to the department.

Submit your application online at wwwgraduate.ku.edu.
Send all other requested application materials to

The University of Kansas
Department of History
Wescoe Hall, 1445 Jayhawk Blvd., Room 3650
Lawrence, KS 66045-7594

M.A. Degree Requirements
The master’s program in history requires satisfactory completion of 30 credit hours of graduate courses including at least 6 hours in history research seminars and the passing of a comprehensive oral examination.

Soon after admission, the student should select a faculty member as his or her adviser. The adviser directs the student’s work and advises the student about selecting Option A or Option B.

Option A. Three fields of history. The fields are the equivalent of secondary fields drawn from three different major fields. With the consent of departmental advisers, when a student’s program warrants a substitution, she or he may substitute an allied field outside the department that provides vital support for the program (e.g., substituting international relations for U.S. diplomatic history). At least 9 hours of course work must be taken in each of the three fields. Students must take HIST 805.

Option B. A major field and one secondary field. At least two history faculty members must serve on the student’s M.A. committee for the major field. At least 18 hours of course work in the major field and 9 hours in the secondary field must be taken. Students must take HIST 805.

Nine hours of work in courses numbered HIST 801 or higher and 6 hours of research seminar are required. Normally, at least 3 hours of seminar under each program should be taken with the student’s program adviser, who chairs the oral examining committee.

All master’s candidates must produce two professional-quality, article-length papers (approximately 30 pages) in the two required seminars. The final oral examination for the master’s degree includes questions concerning the papers as well as coverage of the student’s major and secondary fields.

Ph.D. Degree Requirements
Students normally must complete the M.A. degree before they are eligible to enter the Ph.D. program. Students who enter the M.A. program may either complete the degree or petition for direct admission to the Ph.D. program. This petition first must be endorsed by the student’s adviser and the field committee and then be approved by the department’s graduate board.

In addition to general requirements, the following departmental requirements must be met. A minimum of 11 courses (33 credit hours) is required for the Ph.D. Students may choose between two options for their course work.

- Track A. Students offer a major and two secondary fields. The major field includes six courses (18 credit hours). The secondary fields include two courses (6 credit hours), for a total of 12 credit hours; one of the secondary fields may be taken in a discipline outside the department, but a student may offer all three fields in history. Students must take HIST 805.
- Track B. Students select two majors, for which they take a total of eight courses (24 credit hours), and one secondary field, for which they take two courses (6 credit hours). The secondary field may be taken in a discipline outside the department, but a student may offer all three fields in history. Under the major fields, students may choose a 4/4 or a 5/3 configuration for their eight courses. Students must take HIST 805.

For both Track A and Track B, the major and secondary fields are those listed in this catalog or approved by the graduate board.

The department requires proficiency, at the level the student’s committee deems necessary, in one or two foreign languages appropriate to the student’s fields of specialization. Students should

KU’s doctoral program in history ranks 27th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.

History degree requirements are being revised. Consult the department for current information.

The University of Kansas enrolls more than 30,000 students.
present satisfactory evidence of proficiency in the first language before enrollment in the second semester of degree work. Appropriate proficiency in the second language (if necessary) must be achieved before the student may take the oral comprehensive examination.

Before taking the oral comprehensive examination, students must complete (in addition to the language requirement) a minimum of five colloquia and seminars, including two in the major field(s) and one in each secondary field. At least two of the five must be research seminars in which the student produces professional-quality, article-length papers (approximately 30 pages).

In lieu of written examinations, students compile portfolios of their professional work demonstrating command of their fields and their preparation to undertake dissertation research. Following presentation of the portfolio, students take an oral examination covering their fields of study and their dissertation proposals.

**History Courses**

HIST 500 History of the Book (3).
HIST 502 Development of Ancient Greece, ca. 1000-300 B.C. (3).
HIST 506 Roman Republic (3).
HIST 507 Early Roman Empire (3).
HIST 508 Late Roman Empire (284-527) (3).
HIST 509 Multinational Corporations: The Role of Money and Power (3).
HIST 510 Topics in: (2-3).
HIST 513 Early Medieval Culture (3).
HIST 515 The Crusades in Cross-Cultural Perspective (3).
HIST 516 Later Medieval Culture (3).
HIST 519 European Intellectual History of the 17th Century (3).
HIST 520 The Age of the Renaissance (3).
HIST 521 The Age of the Reformation (3).
HIST 522 The Age of Religious Wars, 1540-1648 (3).
HIST 523 Europe Between Absolutism and Revolution (3).
HIST 524 The French Revolution (3).
HIST 525 Modern France: From Napoleon to de Gaulle (3).
HIST 526 Nineteenth-Century Europe, 1789-1914 (3).
HIST 527 Recent European History, 1870 to the Present (3).
HIST 528 Economic History of Europe (3).
HIST 529 Intellectual History of 19th-Century Europe (3).
HIST 530 History of American Women—Colonial Times to 1870 (3).
HIST 531 History of American Women—1870 to Present (3).
HIST 532 History of Women and Work in Comparative Perspective (3).
HIST 533 The History of Women and the Family in Europe, from 1500 to the Present (3).
HIST 536 Modern German History: 1848 to the Present (3).
HIST 537 France from the Renaissance to the French Revolution (3).
HIST 538 European Intellectual History of the 18th Century (3).
HIST 539 Britain and Ireland to 1200 C.E. (3).
HIST 541 British History, 1500-1660 (3).
HIST 544 Britain and Ireland from 1200 to 1500 (3).
HIST 545 British History, 1660-1832 (3).
HIST 546 History of Cartography (3).
HIST 547 The Intellectual History of Europe in the 20th Century (3).
HIST 548 British History, 1832 to the Present (3).
HIST 550 The British Empire (3).
HIST 551 Spain and Its Empire, 1450-1700 (3).
HIST 553 Muslims, Christians, and Jews in Medieval Iberia (3).
HIST 555 Aspects of British Political Thought (3).
HIST 556 Aspects of British Political Thought, Honors (3).
HIST 557 Nationalism and Communism in East Central Europe from 1772 to the Present (3).
HIST 558 Religion in Britain Since the Reformation: A Survey (3).
HIST 559 Religion in Britain Since the Reformation: A Survey, Honors (3).
HIST 561 Liberation in Southern Africa (3). NW
HIST 562 United States Environmental History in the 20th Century (3).
HIST 563 U.S. Environmental Thought in the 20th Century (3).
HIST 564 Medieval Russia (3).
HIST 565 Imperial Russia and the Soviet Union (3).
HIST 566 Russia in the 18th Century, 1860-1901 (3).
HIST 567 Oil, The Great Powers, and the Persian Gulf, 1900 to the Present (3).
HIST 568 Russia in the 20th Century and Beyond (3).
HIST 569 The Middle East in the 19th and 20th Centuries (3). NW
HIST 570 The Middle East Since World War II (3). NW
HIST 571 The Spanish Borderlands in North America (3).
HIST 572 The United States Borderlands: People, Place, Past (3).
HIST 573 Latin America in the 19th Century (3).
HIST 574 Slavery in the New World (3).
HIST 575 History of Mexico (3).
HIST 576 History of Central America (3).
HIST 577 History of the Caribbean (3).
HIST 578 Social History of South America (3).
HIST 579 The History of Brazil (3).
HIST 580 Economic History of Latin America (3).
HIST 581 Topics in Third World History: (5).
HIST 582 Ancient Japan (3). NW
HIST 583 Imperial China (3). NW
HIST 584 Modern China (3). NW
HIST 587 Early Modern Japan (3). NW
HIST 588 Japan, 1853-1945 (3). NW
HIST 589 Japan Since 1945 (3). NW
HIST 590 Cultural History of Korea (3).
HIST 591 Food in History: West and East (3).
HIST 593 Modern Korea (3). NW
HIST 594 Law and Society in Traditional China (3).
HIST 596 Defining Japan: Marginalized Groups and the Construction of National Identity (3). NW
HIST 597 Japanese Theatre History (3). NW
HIST 598 Sexuality and Gender in African History (3). NW
HIST 599 The Rise and Fall of Apartheid (3).
HIST 600 West African History (3). NW
HIST 601 Oral History (3).
HIST 602 Religion in Britain 1785-1925 (3).
HIST 603 History of Tibet (3). NW
HIST 604 Contemporary Greater China (3). NW
HIST 605 Medieval Japan (3).
HIST 606 Childhood and Youth in America (3).
HIST 607 The Family in History: Comparative Perspectives (3).
HIST 608 History of Sexuality (3).
HIST 609 History of Women and Reform in the United States (3).
HIST 610 American Colonial History (3).
HIST 611 Early American Indian History (3).
HIST 612 History of Federal Indian Law and Policy (3).
HIST 613 Slavery and Freedom in the Age of Jackson (3).
HIST 615 Modern America, 1920-1945 (3).
HIST 616 Contemporary America, 1942-Present (3).
HIST 617 America in the 1960's (3).
HIST 618 History of the American West to 1900 (3).
HIST 619 History of the American Indian (3). NW
HIST 620 History of Kansas (3).
HIST 621 The American West in the 20th Century (3).
HIST 622 History of the Plains Indians (3). NW
HIST 627 Growing Up in America (3).
HIST 628 American Economic Development (3).
HIST 629 The United States and the World to 1890 (3).
HIST 630 The United States and the World, 1890-2003 (3).
HIST 631 The Contemporary Afro-American Experience (3).
HIST 634 The Scientific Revolution in the 16th and 17th Centuries (3).
HIST 636 Agriculture in World History (3).
HIST 639 Modern Revolution in Biology and Medicine, Harvey to the Present (3).
HIST 640 Entrepreneurship in East Asia (3). NW
HIST 646 Witches in European History and Historiography (3).
HIST 649 History of Feminist Theory (3).
HIST 651 History of American Business (3).
HIST 653 American Constitutional History to 1887 (3).
HIST 654 American Constitutional History Since 1887 (3).
HIST 660 Biography of a City: (3).
HIST 661 Palestine and Antiquity (3).
HIST 666 Contemporary America, 1941-Present, Honors (3).
HIST 670 Comparative Diasporas (3).
HIST 696 Seminar in: (3).
HIST 699 Philosophy of History (3).
HIST 705 Globalization in History (3). A study of the increasing interaction among world societies since 1500 and an investigation of the long-term developments behind current world problems. Major topics include western expansion since 1500, the spread of state sovereignty, the formation of a world economy, and spread of international institutions. The current world problems investigated will vary, but may include issues such as environmental rights, migration, trade and the spread of consumer culture, ethnicity and nationalism, and international intervention within states. (Same as INTL 705.) LEC

HIST 719 Colloquium in Medieval Latin (3). An introduction to Medieval Latin for students pursuing similar studies. The content covered will include selections from various literary works, the Vulgate, law codes, legal documents, and other sources from the period 300-1500. May not be retaken for credit. Prerequisite: Four semester hours of college Latin or the equivalent, and/or consent of instructor of Ancient-Medieval graduate adviser. LEC

HIST 720 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 797, BIOL 784, GEOL 784, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 721 Introduction to Museum Public Education (3). Consideration of the goals of a institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various museum developing model programs. (Same as AMS 797, BIOL 784, GEOL 784, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 722 Conservation Principles and Practices (3). This course will acquaint the future museums professional with problems in conserving all types of collections. Practical and theoretical approaches to this subject will be covered with emphasis as the the conservation of manuscripts and works of art. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these phenomena are applied in the preservation of objects. (Same as MUSE 714, BIOL 700, GEOL 780, and MUSE 706.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 723 Introduction to Museum Exhibits (3). This course will consider the role of exhibits as an integral part of museum collection management, research, and public service. Lecture and discussion will focus on issues involved in planning and producing museum exhibits. Laboratory exercises will provide first hand experience with basic preparation techniques. Emphasis will be placed on the management of an exhibit from concept to completion. (Same as MUSE 714, BIOL 780, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 725 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented for museum of art, history, natural history and anthropology. (Same as AMS 730, BIOL 790, GEOL 785, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 727 Practical Archival Principles (3). Study of the principles and practices applicable to the preservation, care, and administration of archives and manuscripts. Practical and theoretical aspects of the subject matter are integrated. (Same as AMS 750.) LEC

HIST 728 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented using as appropriate, case studies and simulations. Additional museum organization models will be considered. (Same as AMS 784, BIOL 780, GEOL 783, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 740 Topics in History for Educators: _____ (1-3). Reading and discussion of selected historical topics, designed specifically for K-12 educators. Pedagogical methods and resources for the study of history will be addressed. Prerequisite: Approval of the instructor. LEC

HIST 747 Teaching about East Asia (2). An advanced survey of the history, culture, and contemporary affairs of China, Japan and Korea, specifically designed for K-12 educators who wish to incorporate East Asian topics into their classroom teaching. Pedagogical methods and resources for the study of East Asia will be emphasized. Topics covered will address relevant benchmarks in the state curricular standards in social studies, themes from the Advanced Placement world history examination, and the national standards in world history. (Same as EALC 747.) Prerequisite: Approval of the instructor. LEC

HIST 748 East Asian Historical Materials: _____ (3). The aim of the course is to provide students with basic research tools needed for individual research projects, in helping them gain experience reading primary and secondary language materials in Japanese and/or Chinese including texts in classical forms of these languages. Attention will be paid to introduction to the Iberian, South American and the histories of historical materials as needed, students will read primary documents in conjunction with secondary readings in Japanese and/or Chinese. Fundamental aspects of paleography may also be introduced in this course depending on student need. Prerequisite: Ability to read Japanese or Chinese. LEC

HIST 799 Museum Studies Apprentice-ship (1-6). Directed practice, directed experience in the collection, care, use, and/or management of historical materials. (Same as AMS 799, ANTH 799, BIOL 799, GEOL 723, and MUSE 799.) Prerequisite: Consent of instructor. FLD

HIST 800 Readings in: _____ (1-8). Prerequisite: Consent of instructor. RSH

HIST 801 Colloquium in: _____ (1-6). Reading and discussion of selected topics. LEC

HIST 802 Seminar in: _____ (3). Research Seminar on selected topics. SEM

HIST 802 Seminar in The Nature of Historiography: _____ (3). Research Seminar on the history of what constitutes the profession of history has developed in terms of training, concepts, and practices in both research and teaching. Consideration also of the major controversies that have developed over historical method and historical interpretation, giving great emphasis to American and European historiography by providing a relationship to the leading concepts of world history. LEC

HIST 806 Studies in: _____ (3). The core course for each thematic major field in the graduate program in History. The course, offered in a colloquium style format, will consider the full range of methodologies or approaches appropriate to the field. LEC

HIST 807 Professional Development Colloquium in Pedagogy (3). This course will help train future professional historians to teach. It will focus on a variety of pedagogical topics including the history faculty task of developing teaching and analytical thinking; teaching research skills; promoting student involvement/participation; determining course goals; use of multimedia technology. In addition to attending class meetings of History 807, students will attend as observers throughout the semester one 300/600-level course in an area relevant to their future teaching and complete the readings assigned to the class. They will produce a course portfolio for an undergraduate course, including; a syllabus designed by the student; a set of assignments that will be part of that course, such as examinations and papers; sample lesson plans; an annotated bibliography of materials relevant to the subject-matter of the course. LEC

HIST 808 Colloquium in Comparative History: _____ (3). A readings-oriented course which explores themes in two or more geographic and/or chronological fields of human experience and discourse. (Same as AMS 731, BIOL 786, GEOL 784, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 812 Seminar in Historical Editing (3). This seminar is oriented toward those students who are independent study in manuscript editing, the editing of primary materials in both research and teaching. Consideration also of the major controversies that have developed over historical method and historical interpretation, giving great emphasis to American and European historiography by providing a relationship to the leading concepts of world history. LEC

HIST 820 Colloquium on Popular Culture in Latin America (3). This course examines the history and theory of popular culture in 19th and 20th century Latin America from a cross-disciplinary perspective. Some of the topics covered may include: the historical development of urban popular culture from brochades and newspapers to radio and television; the politics of music from the tango to the new song movement; folk art vs. high art; the definition of national identity; and the development of an aristocratic public ritual as spectacles for the working class; relationship between mass culture and the novel; gender roles and social order as revealed in forms of popular culture; and the politics of the New Latin American Cinema. Discussions will be in English. No prerequisites. LEC

HIST 821 Colloquium on Iberian and Latin American Democracy (3). The principal purpose of the colloquium is to understand the evolution of government in the Iberian Peninsula and Latin America, with a special focus on efforts to promote democracy and regular, meaningful elections in the nineteenth and twentieth centuries. Core topics include the role of independent institutions, such as the judiciary, the military, and the press in shaping democracy; the role of the political parties and political culture in Latin America; and the relationship of the Church to the state. CE/LE

HIST 822 Colloquium in the Urban History of Latin America (3). Explores the geography and history of the city and urbanization in Latin America with an emphasis on the urban past. Themes include the interaction of historical experience, caudillismo, and militarism as well as on democratic theory, political ideology, political participation, and the development of electoral systems. LEC

HIST 823 Colloquium on Colonial Latin America (3). Explores the history and historiography of Europe and European peoples in Latin America. Major problems include: the establishment of European colonies and their integration in the Iberian empire; the impact of the religious order on colonial societies; the role of the viceroyalty in the new world; the exploitative nature of colonial societies; and the role of the indigenous peoples in shaping colonial society. LEC

HIST 824 Seminar on Labor in Latin America (3). Major problems in class conflict resulting from industrialization of peripheral economies. Focus on such topics as labor movements, workers’-inspired revolutions, women in the workforce, the ideology of labor, labor migration, occupational culture and worker’s relationship to the state. LEC

HIST 825 Seminar in Latin American Foreign Relations (3). This seminar examines the history of Latin America’s foreign relations with the world as well as among the Latin American nations themselves. Examples of topics of interest may be anti-imperialism, Pan-Americanism, foreign cultural influences, non-interventionist international cooperation, interaction and conflict, U.S. intervention, dependency, regional integration, international law and doctrine and national security. LEC

HIST 826 Seminar in 20th-Century South America (3). Research seminar which examines major topics in the history of the Andean and Southern Cone countries. Topics may include: the history of political thought and economic change, the social collapse of Colombia, Argentina and Peru, and the persistence of traditional cultures in the face of capitalist transformations that will be thoroughly explored. LEC

HIST 827 Colloquium in the Social History of Latin America (3). Explores the history and historiography of Latin America’s social history from the conquest to the present. Special topics include: social class and ethnic origin of indigenous groups, peasants, slaves, women, families, workers, and the poor. A long historiographical paper will be required. LEC

HIST 830 Colloquium in 18th- and 19th-Century Britain (3). This course examines the various elite and popular responses to the creation of a capitalist economy (agrarian and industrial) in Britain between 1750 and 1890. LEC
HIST 833 Colloquium in 20th-Century Britain (3). This course examines the main developments in the political, social, and cultural history of Britain since 1890. The aim is to trace the relationship between political movements and socio-cultural attitudes and institutions. LEC

HIST 833 Colloquium in British History, 1500-1660 (3). This course will engage with recent scholarship on the Renaissance and Reformation, the Civil War and the English Republic. LEC

HIST 834 Colloquium in the History of the British Empire (3). The course will deal selectively with themes in the political and cultural interaction of the peoples of the British Isles with peoples overseas, the expansion and contraction of empire, and the rationales for these processes. LEC

HIST 836 Colloquium in British Political Thought (3). This course provides an introduction to the rich tradition of British writings on politics through a close reading of a number of classic texts, interpreted in their historical settings. LEC

HIST 837 Colloquium in British Religious History (3). This course will deal analytically and synoptically with religion in Britain from the reformation to the present with special reference to the Church of England, and will focus on the themes of ecclesiology, ecclesiastical polity, and political theology. LEC

HIST 844 Colloquium on East Central Europe, 1772-1914 (3). The colloquium covers the period beginning with the decline and partitions with Poland and ends with the outbreak of World War I. The major areas of study are the development of modern national consciousness among Poles, Czechs, Slovaks, Magyars, and Ukrainians, and the status of the Jews in these areas; economic, social, and educational development; and the rise of modern political parties. Prerequisite: HIST 597. LEC

HIST 845 Colloquium on East Central Europe, 1914-Present (3). The colloquium begins with a study of the peoples of East Central Europe in World War I, and in the dissolution of the Austro-Hungarian, German and Russian Empires; it ends with the collapse of Communism and the problems of the transition to free market, and democracy. The major areas of study are the political, economic, and social development of Poland, Czechoslovakia, and Hungary; minority problems and policies, and foreign policies in the interwar period, their different experiences in World War II, and their place in Western and Soviet war aims; their varied histories under Communism, especially re-formist and dissident movements, and finally their reactions to its collapse. LEC

HIST 847 Colloquium in Russian History (3). A group readings course that begins with Russian in the nineteenth and continues through the end of the twentieth century. Topics may vary each term, but may include such subjects as political, social, religious, gender, or intellectual history. The course will focus around significant interpretive issues and the historiography that address them. Basic familiarity with the Russian language and recent problem of Russian history is assumed. LEC

HIST 848 Colloquium in 20th Century Russia (3). The focus will be on reading and discussion of historical literature on the end of Imperial Russia, the Russian revolutions, and the Soviet Union and its aftermath. LEC

HIST 853 Research Seminar: The Atlantic World in the Early Modern Period (3). This graduate seminar will focus on interactions between the so-called Old and New Worlds in the three centuries following Columbus’ voyages. The course will pay particular attention to the changes in the lives of Africans, Europeans, and the peoples of the Americas as a result of the emergence of transatlantic economies, empires, and cultural systems. LEC

HIST 856 Colloquium in Modern European History I—Roman History (3). This course will concentrate upon a number of selected topics in the history of Europe between the Renaissance and the French Revolution. Emphasis will be placed upon current problems within recent historiography that deals with them. The first in a sequence of colloquia in Modern European History. LEC

HIST 857 Colloquium in Modern European History II—Major Themes in Early Modern History (3). This course will concentrate upon a number of selected topics in early modern European history. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The second in a sequence of colloquia in Modern European History. LEC

HIST 858 Colloquium in Modern European History III—French Revolution to the Present (3). From the French Revolution into the contemporary era. The third in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 859 Colloquium in Modern European History IV—Major Themes in Modern History (3). This course will concentrate upon a number of selected topics in modern European history. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The fourth in a sequence of colloquia in Modern European History. Required for European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 870 Colloquium on North American Environmental History (3). Intensive survey of significant works in the field from colonial times to the present, with attention to bibliography, research methods and needs, and leading issues in interpretation. LEC

HIST 890 Colloquium in American History, 1492-1800 (3). Study of the leading interpretations of major issues in the history of Colonial and Revolutionary America, with a focus on methodological and interpretive techniques in research. The first course in the sequence of colloquia in United States history. Required of all U.S. history graduate students. LEC

HIST 891 Colloquium in 19th-Century U.S. History (3). Study of the leading interpretations of major issues in the history of the United States in the 19th century. The third course in the sequence of colloquia in United States history. LEC

HIST 892 Colloquium in 20th-Century U.S. History (3). Study of the leading interpretations of major issues in the history of the United States in the 20th century. The third course in the sequence of colloquia in United States history. LEC

HIST 895 Colloquium in the History of Gender (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as AMS 835 and WGSS 833.) LEC

HIST 896 Colloquium in United States Women’s History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as AMS 836 and WGSS 836.) LEC

HIST 897 Comparative Colloquium in Women’s History (3). This colloquium will trace the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as AMS 837 and WGSS 837.) LEC

HIST 898 Colloquium in Material Culture and History (3). This course provides an overview of major theories and methods used in material culture studies and their application to historical research, writing, and presentation. Topics may vary from semester to semester, but could include vernacular architecture, museum studies, anthropology, cultural geography, historical archaeology, and perceptual theory. The course will consist of intensive reading, discussion, and written work. While it is not limited to a particular geographical or chronological area, or discipline, given the state of the field, the main topics covered may be drawn from U.S. history. LEC

HIST 899 Thesis (1-6). An inquiry into the source material upon a specific subject. Prerequisite: Consent of instructor. THE

HIST 900 Independent Research Seminar: ________ (3). Design and completion of an independent project, culminating in the production of a professional-quality paper based on original, primary source research. Prerequisite: Consent of instructor. LEC

HIST 901 Research Seminar in Global History (3). A research seminar oriented around cross-regional, comparative, and transnational aspects of history, culminating in production of a professional-quality paper based on original, primary source research. SEM

HIST 910 Seminar in Roman History: ________ (3). A research seminar in specialized aspects of Roman history. May be repeated for credit. LEC

HIST 912 Numismatics as a Basis for Study of Roman Noble Families of the Late Republic (3). A seminar involving the study of the importance and influence of the noble families of Rome on Roman history (200-27 B.C.) with special emphasis on the literary and numismatic evidence. Reading knowledge of Latin will be essential for this course. LEC

HIST 914 The Major Roman Historians (3). An analysis and criticism of the works of the major historians from Sallust to Ammianus Marcellinus, including a comparison and contrast between the Latin and Greek historians who wrote during the Graeco-Roman period (150 B.C.-378 A.D.). LEC

HIST 918 Elements of Latin Paleography (3). Introduction to the techniques of reading, dating, and localizing medieval Latin manuscripts. LEC

HIST 919 Seminar in Medieval Europe (2-6). LEC

HIST 929 Seminar in Modern European History: ________ (2-5). A study of sources in some restricted fields and the presentation of research results. A reading knowledge of French or German or some other modern language is desirable. LEC

HIST 930 Seminar in British History (3). A research seminar focusing on an actively investigated and controversial themes in British history, chiefly c. 1660-1832. LEC

HIST 932 Order and Disorder in Britain and America, c. 1750-1920 (3). The study of the history of crime and protest in their relationship with the wider social and political theory of Britain and America. Specific topics may include the impact of industrialization, the notion of the ‘moral economy’, the legal and ideological nature of the death penalty, the crowd in history, and the administrative and intellectual developments in policing, prisons, and asylums. LEC

HIST 934 Seminar in Modern European History (1-12). A research and thesis seminar offered by several members of the Standing Committee in Modern European History. Students seeking advanced degrees in European history from the

Clendening History of Medicine Library on the Medical Center campus in Kansas City has one of the finest collections of rare medical books in the world.

Spencer Research Library houses the P.S. O’Hegarty Library, a collection of works on Irish history and the Irish literary renaissance.
Renaissance to the present will enroll each semester for work on their theses and dissertations. May be repeated. LEC

HIST 946 Seminar in the Middle East (3). A research seminar in Middle East history, with emphasis on the 19th and 20th centuries. The European impact on and relationships with the Middle East are stressed. LEC

HIST 947 Seminar in Modern Russian History (3). A focus on major problems of historical interpretation and research investigation from Peter the Great to the present. LEC

HIST 950 Seminar in Latin American History (3). A research seminar focused on a major theme or problem in Latin American history. LEC

HIST 951 Seminar in Latin American Revolutions (3). This seminar focuses on sweeping socio-political upheavals such as occurred in Mexico in 1910, Guatemala in 1944, Bolivia in 1952, Cuba in 1959, and Nicaragua in 1979. After considering various sociological and political theories of revolution the seminar searches for an understanding of the basic reasons for revolutions in the countries mentioned (and failure of revolutionary efforts elsewhere) and possible common characteristics of the Latin American revolutionary processes. LEC

HIST 952 Seminar in Ideology, Violence, and Social Change in Latin America (3). Research seminar focusing on the role of ideas and ideologies, values and cultural norms in the history of Latin America. Political action, including rebellions, movements and strikes by the masses and efforts toward social control by elites will also be a major theme. Finally the course will examine the meaning of "social change" for Latin America and when it can be said that "social change" actually occurs. LEC

HIST 955 Seminar in East Asian History (3). A research seminar in East Asian history. Prerequisite: Open only to graduate students having a reading knowledge of at least one East Asian language. LEC

HIST 962 Seminar in American History (1-12). A research and thesis seminar offered by several members of the Standing Field Committee in United States history. Students seeking advanced degrees in United States history will enroll in the seminar for theses and dissertation credit. May be repeated. LEC

HIST 964 Seminar in American Colonial History (3). An intensive, research-oriented study of American history from the 1600s to the 1700s. The course will cover both British America and New France. May be repeated. LEC

HIST 965 The American Revolutionary Experience (3). An intensive, research-oriented study of American history from 1760 to 1800. May be repeated. LEC

HIST 971 Recent American History, 1920 to the Present (3). LEC

HIST 973 Seminar in United States Women's History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as AMS 973 and WGS 873) LEC

HIST 974 Seminar in American History: (3). A research course focusing on selected topics in history. LEC

HIST 980 Seminar in the Trans-Mississippi West (1-5). LEC

HIST 981 Seminar in Environment and History (3). An inquiry into major issues and methods in environmental history, viewed from both an American and modern world perspective. LEC

HIST 982 Colloquium in the History of the American West (3). Study of issues and interpretations in the history of the American West from prehistory to the present, including attention to new approaches and techniques in research. LEC

HIST 986 Seminar in Historiography of Science (3). Examines the various patterns of interpretation influencing current historiography of science: the substance and impact of "internalist" history, which deals with the evolution of scientific ideas; the diversity of "externalist" history, which stresses interaction between the scientist's activity and social environment. Readings and discussions will assess intellectual, chronological, socio-economic, theological, philosophical, national, institutional and literary aesthetic influences on the history of science. LEC

HIST 999 Doctoral Dissertation (1-12). An inquiry into the source material upon a specific subject. Prerequisite: Consent of instructor. THE

History of Art

Chair: Linda Stone-Ferrier, arhist@ku.edu

Spencer Museum of Art, 1301 Mississippi St., Room 209 Lawrence, KS 66045-7500 www2.ku.edu/~kuarthist, (785) 864-4713, fax: (785) 864-5091

Graduate students in art history have received such major fellowships as Fulbrights and Kress Foundation grants.

The Murphy Travel Fund provides support for national and international research trips for art history graduate students and faculty members.

KU's Spencer Museum of Art is open from 10 a.m. to 4 p.m. Tuesday, Wednesday, Friday, and Saturday; from 10 a.m. to 8 p.m. Thursday; and from noon to 4 p.m. Sunday. Closed Monday.
Ph.D. Degree Requirements
Within three semesters of admission to the Ph.D. program, each student, in consultation with a major adviser, prepares for review by the full Graduate Faculty a petition that proposes a program of study, including a primary field of specialization and two minor fields, one of which may be outside the department. The petition, as approved by the faculty, becomes the student’s program of study, which is then overseen by the major adviser and guided by a committee that includes the major- and minor-field advisers.
Ph.D. aspirants must satisfy all general requirements. Ph.D. aspirants must demonstrate proficiency in two research skills (normally foreign languages) relevant to their research; this requirement must be met before aspirants are admitted to the comprehensive examinations for the doctorate. One of the two research skills is normally the foreign language that met the M.A. language requirement.
Students must take both written and comprehensive oral examinations at the end of their course work. Both written and oral examinations cover the major area and two minor areas specified in the student’s Ph.D. petition. The oral examination normally follows the written examination by two weeks.
Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the Ph.D. and submits a dissertation proposal for faculty approval. Upon acceptance of the dissertation in final draft form, the candidate must successfully pass the final oral examination (the dissertation defense) to complete the degree.

Handbook for Graduate Students
A detailed presentation of departmental regulations is included in the department’s Graduate Student Handbook, available in the departmental office and online at www2.ku.edu/~kuartthis.

History of Art Courses
HA 500 Prints and Printmakers (3).
HA 501 Modern Prints and Drawings (3).
HA 503 Japanese Prints (3).
HA 505 Special Study (3).
HA 506 Early Medieval and Romanesque Art (3).
HA 507 Gothic Art (3).
HA 515 Latin American Art, 1492-1929 (3).
HA 516 Latin American Modern Art (3).
HA 517 Latin American Graphic Arts and Politics (3).
HA 525 Aegean Archaeology and Art (3).
HA 526 Greek Archaeology and Art (3).
HA 527 Late Medieval Art in Italy (3).
HA 528 Archaeology and Art of Greenwich and Rome (3).
HA 529 Archaeology and Art of the Ancient Near East (3).
HA 530 Renaissance Art in Italy: The 15th Century (3).
HA 531 Renaissance Art in Italy: The 16th Century (3).
HA 533 European Art, 1789-1848: Gender and Revolution (3).
HA 534 Art in France, 1848-1900: Modernisms (3).
HA 535 Impressionism (3).
HA 537 Roman Archaeology and Art (3).
HA 545 Early Chinese Art (3).
HA 546 Chinese Sculpture (3).
HA 548 Buddhist Scriptures in Chinese Painting (3).
HA 550 The Arts of the British Isles (3). HT
HA 564 European Art, 1900-1945 (3).
HA 565 Art Since 1945 (3).
HA 566 Art From 1945 to the 1980's: Modernism to Post-Modernism (3).
HA 567 Contemporary Art (3).
HA 570 American Art (3).
HA 571 Modern Sculpture (3).
HA 575 Northern Renaissance Art (3).
HA 576 Northern Baroque Art (3).
HA 577 Southern Baroque Art (3).
HA 578 Central African Art (3). NW
HA 580 History of Photography (3).
HA 581 American Art, Colonial to Civil War (3).
to 14th centuries) in China, in relation to the various theories of Chinese painting and the problems of connoisseurship. Prerequisite: A survey of Asian or Chinese art. LEC

HA 786 Masters of Ming and Ch’ing Dynasty Painting (3). A thorough study of the major artists and schools of Ming and Qing painting (14th to 20th centuries) in relation to the aesthetic theories of the period and to its main stylistic trends. Prerequisite: Consent of instructor. LEC

HA 787 Chinese Painting (3). A survey of the development of painting in China, beginning with the earliest forms of figurative and landscape depiction. Emphasis will be placed on the major painting traditions of the Sung, Yuan, Ming and Qing Dynasties. Prerequisite: Consent of instructor. LEC

HA 788 Proseminar in Japanese Art (3). Critical analysis of readings on selected topics in Japanese art. May be repeated for credit up to a maximum of 12 hours. Prerequisite: Consent of instructor. LEC

HA 805 Seminar in Graphic Arts: (3). A concentrated study of one or more artists, techniques, or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. Prerequisite: A course in painting, sculpture, or in a discipline related to the field of the seminar. LEC

HA 806 The Arts and Crafts Movement, 1860-1930 (3). This seminar will focus on different selected topics on the Arts and Crafts Movement. These could include the movement in relation to: Medievalism, Orientalism, and other revival styles; issues of social and economic policy in various countries; new ideas in design theory in relation to the Industrial Revolution; or investigations of individual artists or groups. LEC

HA 807 Problems in Connoisseurship East: (3-6). The analysis of the work of a specific artist, medium, or period, and developing a knowledge of the methods and means of establishing standards of quality and authenticity. Includes study in Spencer and Nelson Museums. Prerequisite: Nine hours of art history and a reading knowledge of a pertinent foreign language. LEC

HA 808 Problems in Connoisseurship West: (3-6). The analysis of the work of a specific artist, medium, or period, and developing a knowledge of the methods and means of establishing standards of quality and authenticity. Includes study in Spencer and/or Nelson Museums. Prerequisite: Nine hours of art history and a reading knowledge of a pertinent foreign language. LEC

HA 820 Seminar in European Art: (3). A concentrated study of a special topic which may relate to the art of several countries or several centuries of Europe. Different topics are offered in different semesters. May be repeated for credit up to a maximum of nine credit hours. LEC

HA 822 Seminar in Buddhist Art: (3). A concentrated study of selected problems dealing with Buddhist art in Asia. Different topics are offered in different seminars. May be repeated for credit up to a maximum of twelve hours. Prerequisite: Reading knowledge of Chinese or Japanese and consent of instructor. LEC

HA 824 Seminar in Edo Period Painting: (3). Special study of one or more schools of painting in the Edo period (1615-1868) in Japan. Individual works will be analyzed in depth. Prerequisite: A course in Japanese painting. LEC

HA 825 Seminar in Zen Painting and Calligraphy (3). A study of works of painting and calligraphy by Zen monks of China and Japan. There will be an emphasis upon Chinese art related to Zen and the many variations from the late Sung to the twentieth century. Prerequisite: Courses in Chinese and Japanese painting. LEC

HA 826 Seminar in Japanese Literati Art (3). A study of depth in Japanese Nanga masters of the eighteenth and nineteenth centuries. Prerequisite: Consent of instructor. LEC

HA 870 Seminar in Photographic History: (3). Advanced study of photographic images as made and used in the nineteenth and twentieth centuries. Requires primary research. Prerequisites include study of nineteenth century history of art. Specific topics vary. LEC

HA 898 Franklin Murphy Seminar in Art History: (3). This seminar is given each spring by the Murphy Lecturer of the year and includes two weeks of intensive study with a nationally known expert in a special field of art history. The other weeks of seminar meetings for the semester are conducted by the faculty member most closely specialized in this field. Prerequisite: Consent of supervising faculty member. LEC

HA 899 Thesis (1-6). THE

HA 906 Seminar on Special Problems in Art History: (1-6). Seminar dealing with particular art historical problems of a special and specific nature. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 907 Directed Readings in Art (1-12). Supervised study and research into special fields of art of particular interest to the student. Weekly consultation and reports. Prerequisite: Nine hours of art history and a reading knowledge of a pertinent foreign language. RSH

HA 910 Curatorial Problems: (3-8). Primarily for the graduate student interested in art museum work. The student will engage in specialized research related to museum activities resulting in either a research paper, an exhibition, or a catalog of one of the portion of the museum’s holdings. Prerequisite: Nine hours of history of art and a reading knowledge of a pertinent foreign language. LEC

HA 920 Seminar in Early Medieval Art: (3). A study of selected problems dealing with the art of the early Middle Ages. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 925 Seminar in Late Medieval Art: (3). A study of selected problems dealing with the art of the later Middle Ages. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 930 Seminar in Italian Renaissance Art: (3). A concentrated study of one or two artists, monuments or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 935 Seminar in Northern Renaissance Art: (3). A concentrated study of one or two artists, monuments or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 940 Seminar in 17th-Century Art: (3). A concentrated study of one or two artists, monuments or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 950 Seminar in 18th-Century Art: (3). A concentrated study of one or two artists, monuments or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 955 Seminar in 19th-Century Art: (3). A concentrated study of one or two artists, monuments or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 965 Seminar in American Art: (3). A concentrated study of one or two artists, monuments or movements. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC

HA 999 Doctoral Dissertation (1-12). THE

Humanities and Western Civilization

No graduate program in humanities and western civilization is offered. The following courses may be taken for graduate credit.

■ Humanities and Western Civilization Courses

HWC 500 Studies in: (3).

HWC 510 Science, Technology, and Society (2-3).

HWC 514 Totalitarianism and Literature in Central Europe (3).

HWC 520 Literature in Translation (3).

HWC 524 Chinese Thought (3), NW

HWC 530 Study of a Culture: (3).

HWC 540 Translation (3).

HWC 566 The Devil in Russian Literature (3).

HWC 570 Men and Masculinities (3).

HWC 575 The Body, Self, and Society (3).

HWC 600 Biography of a City: (3).

HWC 620 Study of a Culture: (3).

HWC 770 Research in Men and Masculinities (3). An intensive examination of the theory and history of masculinity in the Western World since the sixteenth century. Students will become acquainted with some of the key theories of men and masculinities, examine in depth the interplay between manhood and modernity, and develop research projects on a topic negotiated with the instructor. May be repeated if content varies sufficiently. LEC

HWC 775 Advanced Study in the Body and Senses (3). An intensive examination of the role of the human body in the creation of personal and social identities in the West since the sixteenth century. Emphasis is on understanding how contemporary theories of embodiment are applied to concrete historical problems. May be repeated if course content varies sufficiently. LEC

■ Peace and Conflict Studies Courses

PCS 550 Classics of Peace Literature (3), HI.

PCS 555 Topics in Peace and Conflict Studies: (3).

PCS 560 Directed Study in Peace and Conflict Studies (1-3).

PCS 565 The Literature of Human Rights (3).

PCS 650 Senior Seminar in Peace and Conflict Studies (3).

PCS 760 Investigation and Conference in Peace and Conflict Studies (3). Research under the supervision of a faculty member and approved for the Peace and Conflict Studies program. Individual conferences, reports, and papers; may be combined with classwork. Open only to graduate students. LEC
Interdisciplinary Studies

The College of Liberal Arts and Sciences offers degrees in several departments and programs that are interdisciplinary in nature. For information on these, see African and African-American studies; American Studies; East Asian Languages and Cultures; Global Indigenous Nations Studies; International Studies; Latin American Area Studies; Museum Studies; and Russian, East European, and Eurasian Studies in this chapter of the catalog.

Courses are offered in several other areas, such as genetics and women, gender, and sexuality studies, but there are no graduate programs in these areas. The courses, however, may be applied to degrees in other related fields. Special studies majors in these or other interdisciplinary areas may also be authorized upon petition. See sections on Special Studies in the General Information chapter of this catalog.

For interdisciplinary graduate certificates, see Graduate Certificate Programs in the General Information chapter of this catalog.

Indigenous Nations Studies, Global

See Global Indigenous Nations Studies in this chapter.

International Studies

Director: Gary Reich, greich@ku.edu, (785) 864-9053
Blake Hall, 1541 Lilac Lane, Room 409
Lawrence, KS 66045-3129

Program Assistant: KU Edwards Campus, 12600 Quivira Road
Overland Park, KS 66213-2402, www.intl.ku.edu, (913) 897-8510

Affiliated Faculty: This program draws on the expertise of faculty from departments throughout the university, including African and African-American Studies; Anthropology; East Asian Languages and Cultures; Economics; European Studies; History; Humanities and Western Civilization; Latin American Area Studies; Political Science; Russian, East European, and Eurasian Studies; Sociology; and the Schools of Business and Journalism and Mass Communications.

The Master of Arts in International Studies provides an analytically sophisticated understanding of the contemporary global arena. Students pursue interests in global politics, society, and culture across a broad range of courses in the humanities and social sciences. Students develop a specialization in a world region and a topic that transcends national borders. The degree offers students the skills and knowledge to operate in a world where traditional boundaries are disappearing. The program is based at KU’s Edwards Campus in Overland Park, but students complete courses both on the Edwards Campus and on KU’s Lawrence campus.

Admission

Students are admitted for both fall and spring semesters. Applicants must submit the following materials: (1) an application with appropriate application fee, (2) one official transcript from each institution of higher education attended for undergraduate and graduate work, (3) a 500- to 1,000-word essay outlining relevant experiences and reasons for pursuing this degree, (4) a current résumé, (5) three letters of recommendation sent directly from the references, and (6) Graduate Record Examination scores (Law School Admission Test or Graduate Management Admission Test results are acceptable substitutes). International students also must submit Test of English as a Foreign Language scores for an examination taken within the past two years, unless they hold degrees from English-speaking institutions. All materials must be received before the application can be evaluated. More information about the application process can be found on the program’s Web site, www.intl.ku.edu. In general, to enter this program, a student must have a bachelor’s degree from an accredited institution with at least a 3.0 grade-point average on a 4.0 scale; admitted students typically have grade-point averages well above 3.0. Materials are reviewed by a subcommittee of the program advisory committee, which also considers the applicant’s overall record and prospects for success.

Submit your application and fee online at www.graduate.ku.edu. Send all other application materials to the program assistant at the Edwards Campus address above.

M.A. Degree Requirements

The Master of Arts in International Studies is a 37-credit-hour degree. All students complete two core courses, INTL 701 and INTL 702, and eight graduate-level elective courses (24 credit hours). These electives must form two coherent clusters, one around a world region and the other on a topic specialization approved by the student’s adviser.

Thesis Option. Students electing to write a thesis must enroll in 6 thesis hours and 1 hour of INTL 897, complete a significant original research project approved by a faculty committee, and pass a comprehensive examination.

Nonthesis Option. Students pursuing the nonthesis option complete an additional 6 hours of electives and enroll in 1 hour of INTL 897, which requires completion of written examinations over the core course content and the student’s regional and topic concentrations as well as an oral examination.

For all students, the M.A. degree also requires evidence of current competence (equivalent to two years of successful college-level study) in a modern spoken and written language other than English; courses taken to complete this requirement generally do not count toward the degree. Students must meet all general requirements as well as program requirements.

The University of Kansas has a mission to serve the international dimensions of higher education.

It is each graduate student’s responsibility to know and observe all regulations and procedures relating to the graduate degree program the student is pursuing. See Student Responsibilities on page 26.

Since 1976, federal fellowships have been awarded yearly for graduate study of Latin America.
Regional Specializations. These courses give students substantial knowledge about a selected region of the world. Up to three language courses (9 hours) at or above the 500 level may count toward this requirement. Regional specializations usually correspond to one of KU’s area studies programs:

- African and African-American studies
- East Asian studies
- European studies
- Latin American area studies
- Russian, East European, and Eurasian studies

A student may petition to focus on a region that does not correspond to the boundaries of the KU area studies programs. For instance, a student might choose to focus on the region of the North American Free Trade Agreement (Canada, Mexico, and the United States), the Middle East, South Asia, the Pacific Rim, or the Islamic world. The petition is granted only if the program committee and director are assured that the student has a qualified academic adviser with expert knowledge of that area.

Topic Specialization. Topic specialization courses allow the student to develop an understanding of a particular issue of interest that reaches across national and regional borders. Topics might include gender and development, international conflict, intercultural communication, international politics, globalization, international business, global urbanization, peace studies, or another topic approved by the director. The courses below are examples of electives that might be used in some of these areas; each student works with an adviser to identify appropriate courses.

International Culture and Communications focuses on issues of culture, ethnicity, diversity, and cross-cultural communications and examines how various cultures around the world deal with outside influences and define themselves as distinctive societies. Sample courses:

- AAAS 560 Race, Gender, and Post-Colonial Discourses
- ANTH 674 Political Anthropology
- COMS 647 Issues in Intercultural Communication
- ENGL 774 Topics in Literatures of Africa and the African Diaspora
- FMS 813 Development of the International Sound Film
- HWC 500 Studies in Comparative Literature
- SOC 626 Religion and Society

International Politics and Policies addresses foreign policy, comparative public policy, general theories of international relations and comparative politics, and current global issues. Sample courses:

- AAAS 554 Contemporary Health Issues in Africa
- ANTH 571 Violence, Aggression, and Terrorism in the Modern World
- ANTH 674 Political Anthropology
- C&T 864 International Issues in the K-12 Curriculum
- POLS 670 United States Foreign Policy
- POLS 673 International Organization
- POLS 774 International Law
- SOC 672 Sociology of War and Peace

International Business and Economics offers a foundation in global business and economics, economic history, and political economy. Sample courses:

- ECON 835 Comparative Economic Systems
- HIST 509 Multinational Corporations: The Role of Money and Power
- HIST 526 Economic History of Europe (Same as ECON 535)
- IBUS 700 Managing in a Global Environment
- IBUS 701 International Business
- MKTG 708 Global Marketing

International Studies Courses

INTL 701 Approaches to International Studies (3). This course examines approaches to the study of culture, politics, and society as applied in international studies research. Substantive and disciplinary content vary by instructor, but typically include such topics as economic development, ethnicity, religion, democratization, peace and conflict issues, and cultural studies. The study of these topics is accompanied by discussions of the principles of theory development, proper research design, choosing a research topic, construction of literature reviews, and the use of library resources in international studies research. LEC

INTL 702 Globalization (3). A central issue in international studies is globalization, the increasing interconnectedness of societies and economies. This course examines globalization from an historical and contemporary perspective. Major topics include (but are not necessarily limited to) the historical expansion of the West since 1500, the growth of international economic institutions, conflict among global cultures, the future of state sovereignty, and the challenges of economic integration. LEC

INTL 703 The World Economy (3). An introduction to international trade and finance, theories of economic development, and international economic structures. Not appropriate for economics majors. LEC

INTL 704 Global Cultures and Societies (3). Examination of the components of culture, economic and political anthropology, major global cultural areas, and the impact of cultural differences as expressed through language, literature, religion, thought, and motivation in cross-cultural communications. LEC

INTL 705 Globalization in History (3). A study of the increasing interaction among world societies since 1500 and an investigation of the long-term developments behind current world problems. Major topics include Western expansion since 1500, the spread of state sovereignty, the formation of a world economy, and the spread of international institutions. Current issues will vary, but may include environmental crises, human rights, migration, free trade and the spread of consumer culture, ethnicity and nationalism, and international intervention within states. (Same as HIST 705.) LEC

INTL 706 Comparative Governments (3). Survey of different governmental structures in the contemporary world and the ways these countries have confronted issues such as modernization and development, economic security, ethnic pluralism and conflict, and globalization. LEC

INTL 750 Topics in International Studies: (1-6). A study of one or more selected topics in international studies. Course may be taken more than once. LEC

INTL 793 Directed Readings (1-5). Individual and supervised readings in a selected area of international studies. Course is repeatable with permission of the program director. LEC

INTL 897 Examination Preparation (1). Independent study in preparation for the Comprehensive M.A. examination. Graded on satisfactory/unsatisfactory basis. May be repeated. LEC

INTL 899 Thesis (1-6). Enrollment for writing thesis for master’s degree. THE

Italian
See French and Italian.

Japanese
See East Asian Languages and Cultures.

Korean
See East Asian Languages and Cultures.

Latin
See Classics.

Latin American Area Studies

Chair: Elizabeth A. Kuznesof, latamst@ku.edu
Associate Director and Graduate Adviser: Peter Herlihy
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7545
www2.ku.edu/~latamst,

Since 1970, KU has maintained the only Latin American Studies resource center in the Great Plains.

Established in 1959, KU’s exchange with Universidad de Costa Rica is the oldest of its kind in the Western Hemisphere.

Up to 12 graduate credit hours from the Universidad de Costa Rica may be applied to the M.A. degree in Latin American area studies.

224 THE UNIVERSITY OF KANSAS I 2009-2011


Assistant Professors: Bejarano, Bozarth, Chappell, Cushman, Fitzgerald, Flores, Golash-Boza, Hart, Jahanbani, Metz, Obadare, Padilla, Rossomondo, Sneed, Vasquez, Wong

Lecturers: L. Herlihy, Kinti-Moss, Rodrigues, Tammons

The Center of Latin American Studies administers an interdisciplinary program of substantive and language courses leading to the Master of Arts degree. Students may pursue the M.A. as a terminal degree for careers in the public or private sector or as preparation for additional graduate study. The center also offers two graduate certificates of four courses each in Brazilian Studies and Central American and Mexican Studies.

Admission

Admission requires a B.A., preferably in one of the social sciences or humanities, and language proficiency in either Spanish or Portuguese as demonstrated by completion of a fourth-semester course or the equivalent. The Graduate Record Examination is required for U.S. citizens.

Submit your application online at www.graduate.ku.edu.

Send transcripts of all completed college and university course work and all other requested application materials to:

The University of Kansas
Latin American Area Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7545

M.A. Degree Requirements

Course Work. A minimum of 30 graduate credit hours is required in social sciences or humanities courses with Latin American content. At least 18 hours must have 50 to 100 percent of their content dedicated to Latin America. Literature courses with Latin American content at the 500-level or above (except PORT 611 and HAIT 500) may be counted as part of the 30 required hours.

Required courses are LAA 700 Introduction to Latin American Library Resources, LAA 701 Interdisciplinary Seminar in Latin American Culture and Problems, and two other seminars with at least 50 percent of their content dedicated to Latin America, each in a separate discipline, at the 700 level or above (excluding thesis and readings hours). Incoming students should enroll in LAA 700 during the first fall semester. All students must consult the graduate adviser before enrollment each semester. Up to 12 graduate hours from the University of Costa Rica may be applied to the M.A. To be eligible, students must have completed one semester of course work at KU and must obtain the graduate adviser’s approval of the UCR courses.

Language Proficiency. M.A. candidates must demonstrate comprehensive proficiency in Spanish or Portuguese. This includes aural, speaking, reading, and writing ability. Completion of SPAN 424 and SPAN 428 or a higher-level course constitutes comprehensive proficiency in Spanish. Comprehensive proficiency in Portuguese requires completion of a 500-level or higher literature course. The language requirements should be satisfied as early as possible. Students also must complete two semesters in a second language (SPAN 104 and SPAN 108; PORT 104 and PORT 108), or the equivalent (e.g. PORT 611). Quichua, Kaqchikel Maya, or Haitian Creole may be substituted as the language of reading proficiency with approval of the director.

M.A. Degree Options

Thesis and nonthesis degrees are offered. The thesis degree is most appropriate as preparation for a doctoral program and dissertation. Students must declare their intention to write a thesis before the end of the first year and form a committee of three faculty members, each from a different discipline. The student defends the completed thesis in an oral examination before this committee. A student must enroll in at least 3 credit hours of thesis. Students may count up to 6 credit hours of thesis toward the degree.

The nonthesis M.A. degree is suitable for a career in public service or business. The culmination of the nonthesis M.A. is an oral examination during the last semester of the student’s program.

The Center of Latin American Studies produces a handout, Nonthesis M.A. Degree Option: Oral Exam Guidelines.

According to the continuous enrollment policy of the College, once the student’s course work is completed, the student must enroll in at least 1 credit hour of thesis/nonthesis (LAA 899) per semester (excluding summers) until the thesis and its defense or the oral examination is completed.

Study in Latin America.

The center encourages students to study and do research in Latin America. Intensive language institutes in Portuguese and Spanish are held in Salvador, Brazil; and Puebla, Mexico; respectively. The center has helped develop exchange relationships with universities in Costa Rica, Paraguay, Peru and Brazil. One of the oldest and most successful academic study abroad programs in Latin America is the Kansas program at the Universidad de Costa Rica.

Recommended Graduate Courses. These courses have 50 to 100 percent Latin American content:

- AAAS 574 Slavery in the New World (same as HIST 574)
- ANTH 500 Topics in Archaeology: _____ (taught by Hoopes)
- ANTH 501 Topics in Sociocultural Anthropology: _____ (taught by Metz)
- ANTH 506 Ancient American Civilizations: Mesoamerica
- ANTH 507 The Ancient Maya
- ANTH 508 Ancient American Civilizations: The Central Andes
- ANTH 718 Seminar in Latin American Archaeology: Lower Central America
- ANTH 775 Seminar in Cultural Anthropology: _____ (taught by Dean, Gibson or Metz)
- ANTH 785 Topics in Ethnology: _____ (taught by Dean or Metz)
- ECON 584 Economic Development of Latin America
- ENG 790 Studies in: U.S. Latino/a Literature
- FMS 702 Graduate Seminar in: Latin American Film
- GEOG 571 Topics in Cultural Geography: _____ (taught by Brown or Herlihy)
- GEOG 575 Geography of Population
- GEOG 591 Geography of Latin America
- GEOG 592 Middle American Geography
- GEOG 597 Geography of Brazil
- GEOG 711 Topics in Cultural Geography: _____ (taught by Brown or Herlihy)
- GEOG 791 Latin American Regions
- GEOG 900 Seminar in Geography: Cultural Ecology (taught by Herlihy)
- GEOG 990 Seminar in Regional Geography: Central American Indigenous Peoples (taught by Herlihy)
- HAIT 505 Special Study: Latin America
- HAIT 507 The Spanish Borderlands in North America
- HIST 573 Latin America in the 19th Century
- HIST 575 Slavery in the New World (same as AAAS 574)
- HIST 575 History of Mexico
- HIST 576 History of Central America
- HIST 578 Social History of South America
- HIST 579 The History of Brazil
- HIST 580 Economic History of Latin America
- HIST 581 Topics in Third World History: _____ (taught by Rosenthal, Kuznesof)
- HIST 607 The Family in History: Comparative Perspectives (taught by Kuznesof)
- HIST 696 Seminar in: Latin America (taught by Cushman, Rosenthal, Kuznesof)
- HIST 801 Colloquium in: _____ (taught by Rosenthal, Kuznesof)
- HIST 802 Colloquium in Comparative History: _____ (taught by Cushman, Rosenthal, Kuznesof)
- HIST 820 Colloquium on Popular Culture in Latin America
- HIST 821 Colloquium on Iberian and Latin American Democracy
- HIST 822 Colloquium in the Urban History of Latin America
- HIST 823 Colloquium on Colonial Latin America
- HIST 824 Seminar on Labor in Latin America
Latin American Area Studies

HIST 825 Seminar in Latin American Foreign Relations
HIST 826 Seminar in 20th-Century South America
HIST 827 Colloquium in the Social History of Latin America
HIST 853 Research Seminar: The Atlantic World in the Early Modern Period (taught by Kuznesof)
HIST 950 Seminar in Latin American History
HIST 951 Seminar in Latin American Revolutions
HIST 952 Seminar in Ideology, Violence, and Social Change in Latin America
LING 565 Native American Writing
POL S 658 Theories of Politics in Latin America
POL S 659 Political Dynamics of Latin America
POL S 759 Revolutionary Politics of Latin America
PORT 740 Survey of Brazilian Literature
PORT 742 The Brazilian Novel
PORT 746 The Brazilian Short Story
PORT 750 Brazilian Poetry
PORT 760 Contemporary Brazilian Literature
PORT 780 Special Readings in Portuguese and Brazilian Literature
PORT 970 Seminar in Brazilian Literature: ___
SOC 531 Global Social Change
SOC 780 Advanced Topics in Sociology: Third World Social Change; Women of the Third World;
SPAN 520 Structure of Spanish
SPAN 522 Advanced Studies in Spanish Language: ___
SPAN 540 Colloquium on Hispanic Studies: ___
SPAN 560 Colloquium on Latin American Film
SPAN 570 Studies in Hispanic Linguistics:
SPAN 717 History of the Spanish Language
SPAN 720 Syntax and Composition
SPAN 770 Spanish-American Drama
SPAN 771 Spanish-American Literature: ___
SPAN 772 The Modern Spanish-American Novel, 1900-1950
SPAN 773 The Modern Spanish-American Novel Since 1950
SPAN 774 Spanish-American Short Story
SPAN 781 Spanish-American Colonial Studies
SPAN 784 Spanish-American Modernism and Vanguards
SPAN 785 Special Topics in Spanish-American Literature:
SPAN 790 Spanish Linguistics: Theory and Application to Teaching
SPAN 795 Literary Theory and Criticism
SPAN 817 Spanish Historical Grammar
SPAN 970 Seminar: Spanish-American Drama:
SPAN 972 Seminar: Spanish-American Novel: ___
SPAN 974 Seminar: Spanish-American Poetry:
SPAN 976 Seminar: Spanish-American Short Story:
SPAN 978 Seminar: Spanish-American Essay: ___

Recommended Graduate Courses. These courses have 25 to 50 percent Latin American content:

AAAS 520 African Studies in:
AAAS 555 African Film and Video
ANTH 501 Topics in Sociocultural Anthropology:
ANTH 512 Ethnohistory:
ANTH 544 Origins of Native Americans
ANTH 563 Cultural Diversity in the United States
ANTH 586 Visual Anthropology
ANTH 595 The Colonial Experience
ANTH 652 Population Dynamics
ANTH 674 Political Anthropology
ANTH 695 Cultural Ecology (taught by Gibson or Herlihy)
ANTH 754 Biological Bases of Human Behavior (taught by Crawford)
ANTH 770 Research Methods in Physical Anthropology
ANTH 794 Material Culture
ARCH 800 Special Topics in Architecture: City Form: The Americas (taught by Swann)
BIOL 607 Field and Laboratory Exercises in Plant Ecology
C& T 807 Multicultural Education
C& T 864 International Issues in the K-12 Curriculum
ECON 582 Economic Growth and Development
ECON 604 International Trade
ECON 605 International Finance
ECON 715 Elementary Ecometrics
ECON 740 Theory of Economic Growth and Development
ECON 750 The Theory of International Finance
ECON 850 The Advanced Theory of International Finance
ELPS 743 Foundations of Multicultural Education
ELPS 772 Philosophical Problems in Comparative Education
ELPS 773 School and Society in Comparative Education
ENGL 570 Topics in American Literature:
ENGL 672 Film Seminar in: ___ (taught by Falicov)
GEOL 507 Geography of American Indians (taught by Herlihy)
GEOL 670 Cultural Ecology
GEOG 755 Prosemantics of Population Geography
GEOG 975 Seminar in Population Geography (taught by Nunley)
HA 706 Seminar on Special Problems in Art History: North America (taught by Eldredge)
HIST 501 Directed Studies in Haitian Language and Literature
HIST 509 Multinational Corporations: The Role of Money and Power
HIST 551 Spain and Its Empire, 1450-1700
HIST 572 The United States Borderlands: People, Place, Past
HIST 630 The United States and the World, 1890-2003
HIST 636 Agriculture in World History (taught by Worster)
HIST 696 Seminar in: History of Disaster
HIST 806 Studies in: World Environmental History
HWC 620 Study of a Culture: ___
IBUS 701 International Business (taught by Kleinberg)
IBUS 895 Graduate Seminar in International Business: Global Business Environment (taught by Birch)
LAW 930 International Law Seminar (taught by Head)
LING 575 The Structure of:
LING 700 Introduction to Linguistic Science
LING 791 Topics in Linguistics:
MUSC 560 Music in World Cultures (taught by Wong)
MUSC 754 Music of the Baroque Era
MUSC 940 Seminar on Selected Topics in Musicology: 20th-Century Hispanic Masters (taught by Schwartz-Kates)
POLS 600 Contemporary Feminist Political Theory
POLS 600 The Politics and Problems of Developing Countries
POLS 663 Protest and Revolution
POLS 670 United States Foreign Policy
POLS 672 International Political Economy
POLS 682 U.S. Policy—Post-Colonial World
POLS 726 Public Policy in Comparative Perspective
POLS 774 International Relations
POLS 850 Introduction to Comparative Politics
POLS 870 International Relations
POLS 960 Politics of Developing Countries
POLS 973 International Political Economy
POLS 974 International Mediation and Conflict Resolution
POLS 978 Advanced Topics in International Relations Theory
SOC 522 African and Ethnic Relations (taught by Golash-Boza)
SOC 533 Industrialization in Developing Nations
SOC 534 Comparative Racial and Ethnic Relations (taught by Golash-Boza)
SOC 619 Political Sociology
SOC 627 School and Society
SOC 873 International Political Economy
SOC 892 Teaching Seminar
SOC 970 Seminar on Special Topics in Social Conflict and Change:
SPAN 801 Teaching Spanish in Institutions of Higher Learning
UBP 565 Principles of Environmental Planning
VAF 751 Introduction to Art Museum Education
WGS 560 Race, Gender, and Post-Colonial Discourses (taught by Ajayi-Soyinka)
WGS 600 Contemporary Feminist Political Theory
WGS 601 Seminar in Women’s Studies
WGS 606 Studies in:

Latin American Area Studies Courses

LAA 500 Directed Study in Latin American Area Studies (1-3).
LAA 503 Multilingualism and Multiculturalism in Latin America (3).
LAA 503 Race, Gender, Ethnicity, and Nationalism in Latin America (3).
LAA 504 Politics of Culture in Modern Latin America (3).
LAA 505 U.S. Latino and Latin American Film and Literature (3).
LAA 506 Race, Gender, Ethnicity, and Nationalism in Latin America, Honors (3). NW
LAA 602 Topics in Latin American Studies: ___ (3).
LAA 634 Indigenous Traditions of Latin America (3). NW
LAA 665 Women, Health, and Healing in Latin America (3).
LAA 700 Introduction to Latin American Library Resources (3). A survey of bibliographic and reference sources for research on Latin America in the humanities and social sciences. Designed to prepare students for library research at the seminar, thesis, or dissertation level. Prerequisite: Junior standing, reading knowledge of Spanish or Portuguese. LEC
LAA 701 Interdisciplinary Seminar in Latin American Culture and Problems (3). An interdisciplinary seminar incorporating significant and pertinent materials from the fields of anthropology, economics, geography, history, political science, sociology, and Spanish and Portuguese literature. Required of all graduate students enrolled in the Master of Arts program in Latin American Area Studies. Prerequisite: LAA 700 (may be taken simultaneously with LAA 701 if both courses offered during same semester). LEC
LAA 703 Research Colloquium on Brazil (3). An interdisciplinary research seminar on historical and contemporary issues in Brazil, incorporating information and analysis from such fields as anthropology, economics, geography, history, political science, sociology, and Spanish and Portuguese literature and culture. Required for the Brazilian Graduate Certificate. Prerequisite: Recommended reading proficiency in Spanish. LEC
LAA 704 Research Colloquium on Central America and Mexico (3). An interdisciplinary seminar on historical and contemporary issues in Central America and Mexico, incorporating information and analysis from such fields as anthropology, economics, geography, history, political science, sociology, and Spanish and Portuguese literature and culture. Required for the Central America & Mexico Graduate Certificate. Prerequisite: Recommended reading proficiency in Spanish. LEC
LAA 800 Investigation and Conference (1-2). Investigation and research of interdisciplinary topics in Latin American Studies. RSH
LAA 899 Thesis/Nonthesis (1-6). Prerequisite: Consent of instructor. THE
Liberal Arts and Sciences

No graduate degree program is offered in this area, but the following courses are offered for graduate credit.

Liberal Arts and Sciences Courses

LA&S 700 Writing Center Theory and Administration (3). This course explores theories motivating writing center administration and practice. Students will investigate the multiple functions of writing centers, from writing labs associated with college composition instruction, to decentralized resources for writing faculty teaching writing across the disciplines, to elementary, secondary, and community support centers for writers, to online consultation services. Students will choose a special interest or problem, and from an administrative perspective, design a research study and propose actions such as creating policy, developing curricula, designing materials, or conducting assessments. (Same as ENGL 885.) Prerequisite: LA&S 400, ENGL 400, or consent of instructor. LEC

LA&S 740 Computers for the Classroom (1-3). “The Art and Science of Computer Presentation.” An inter-disciplinary course designed to explore current technology in “Computer Presentations” (various equipment and programs), research the field of information processing, and develop applications for interactive multimedia communications. Not open to students who have received credit for LA&S 400. Prerequisite: Consent of instructor. LEC

LA&S 792 Topics in: (1-3). An interdisciplinary study of a variety of topics from the Liberal Arts and Sciences. Usually intended for graduate students, but may also be taken by qualified upper level undergraduates. May be repeated for credit when topic differs. LEC

Linguistics

Chair: Allard Jongman
Blake Hall, 1541 Lilac Lane, Room 427
Lawrence, KS 66045-3129, www.linguistics.ku.edu, (785) 864-3450
Graduate Director: Jie Zhang, 420E Blake Hall, (785) 864-2879
Professors: Jongman, Rosen, Sereno
Professors Emeriti: Henderson, Ingemann, Miner, Percival, Rankin, Watkins, Yamamoto
Associate Professors: Pye, Zhang
Assistant Professors: Fiorentino, Gabriele, Minai, Torrence

Admission

Applicants must submit transcripts for all post-secondary work, evidence of a baccalaureate degree (preferably with a major in linguistics or a related field), three letters of recommendation, and Graduate Record Examination scores. Applicants who are not native speakers of English must demonstrate English proficiency with Test of English as a Foreign Language scores of at least 53 (paper) or 20 (computer) in all sections or International English Language Testing System scores of at least 6.0 overall with no part score below 5.5.

Submit your application online at www.linguistics.ku.edu.
Send all other requested application materials to:
The University of Kansas
Department of Linguistics
Blake Hall, 1541 Lilac Lane, Room 427
Lawrence, KS 66045-3129

M.A. Degree Requirements

Prerequisites. Three credit hours of linguistics (LING 700 or equivalent) and reading ability in a foreign language (not English) with a significant linguistics literature. Students who do not meet these prerequisites but have undergraduate majors in related fields (such as a foreign language, English, speech, anthropology, or psychology) may be accepted with the provision that they make up deficiencies as soon as possible.

Degree Requirements. The following are minimum requirements.

Course Work: 33 credit hours of graduate work including
LING 794 Proseminar
LING 705 Phonetics I
LING 712 Phonology I
LING 725 Syntax I
LING 709 First Language Acquisition or
LING 715 Linguistics and Second Language Acquisition
LING 735 Psycholinguistics or LING 738 Neurolinguistics

One of the following research methods courses:
LING 720 Research Methods in Linguistics
LING 740 Linguistic Data Processing
LING 741 Field Methods in Linguistic Description
LING 782 Research Methods in Child Language

Twelve credit hours of electives to be determined by the student and the student’s adviser, excluding LING 998 Independent Study.

M.A. students can complete the degree either by writing a thesis and passing a thesis oral defense or by passing a written comprehensive examination and satisfying a research component.

Thesis Option: A maximum of 3 hours of thesis credit may be applied toward the minimum of 33 hours for the degree. The thesis must be defended successfully in an oral examination.

Comprehensive Examination Option: A comprehensive written examination is taken no later than the semester in which the student completes 33 hours of course work applicable to the M.A.

Students taking the comprehensive examination also must satisfy a research component by taking a course with a significant research component (e.g., a seminar or LING 707, LING 709, or LING 741) or writing a detailed research or grant proposal.

Ph.D. Degree Requirements

Prerequisites. M.A. in linguistics with a thesis. A student entering the Ph.D. program without courses equivalent to these must take them as soon as they are offered, even if they would conflict with an advanced course for which the student is eligible.

Residence. Two semesters, which may include one summer session, must be spent in full-time resident study at KU. Normally, an enrollment of 9 credit hours is considered full-time during the semester. See General Regulations in the General Information chapter of this catalog.

Research Skills

1. Language Requirement: Reading ability in a foreign language (not English) with a significant linguistics literature.

2. Research Skills Requirement: One of the following:
A course in statistics
A course in a computer programming language
LING 783 Computational Linguistics

The student also is expected to know such additional languages as may be necessary for research.

Minimum Course Requirements. Twenty-four credit hours, consisting of

Methods Requirement. LING 741 Field Methods in Linguistic Description
If already taken for M.A., replace with one of the following:
LING 720 Research Methods in Linguistics
LING 740 Linguistic Data Processing
LING 782 Research Methods in Child Language

Three of the following second-level courses:
LING 707 Phonetics II
LING 714 Phonology II
LING 716 Second Language Acquisition

Linguistics offers courses in first- and second-language acquisition, Native Mesoamerican writing, and the structure of North American Indian languages.

International Programs coordinates international activities on the Lawrence campus, working with foreign area-studies centers, professional schools, and other units to provide enriched international opportunities for faculty and students.
Dissertation. Within one year of completing all course requirements and fulfilling the foreign language requirements, the student must write two papers and a dissertation proposal. One paper must be in the area of specialization, the other in a second area of linguistics.

Final Oral Examination

Facilities

With the Department of Speech-Language-Hearing: Sciences and Disorders, linguistics operates the Undergraduate Instructional Laboratory in Phonetics and Speech Science. The department has a fully equipped phonetics and psycholinguistics laboratory (KUPPL), first and second language acquisition research laboratories, a neurolinguistics research laboratory, an anechoic chamber, a small departmental library, a student computer laboratory, and digital recorders for field work.

Linguistics Courses

LING 539 The Acquisition of Morphosyntax (3).
LING 543 Language and Culture in Arabic-Speaking Communities (3).
LING 565 Native Mesoamerican Writing (3).
LING 570 The Structure of Japanese (3).
LING 572 The Structure of Chinese (3).
LING 575 The Structure of: (3).

LING 700 Introduction to Linguistic Science (3). An introduction to the theory and techniques of linguistic (NEW) science for majors and others intending to do advanced work in linguistics. Emphasis on the sound system, grammatical structure, and semantic structure of languages. Lectures and laboratory sessions. Will not count toward any graduate degree in linguistics. Not open to students who have taken LING 106 or LING 107. LEC

LING 705 Phonetics I (3). This course provides a basic introduction to the study of human speech sounds. Topics to be covered include anatomy and physiology of the speech production apparatus, transcription and production of the world’s sounds, basic acoustics, computerized methods for speech analysis, acoustic characteristics of speech sounds, stress, and intonation. A ‘hands on’ laboratory project is part of the course. Prerequisite: An introductory course in linguistics. LEC

LING 707 Phonetics II (3). This course is a continuation of Phonetics I (LING 705) and provides an in-depth study of the basic properties of acoustic phonetics. Topics to be covered include vocal tract acoustics, quantal theory, speaker normalization, theories of speech perception, prosody, the phonetics of second language acquisition, and the production of speech to gender, talker, region, and socio-economic status. In addition, a number of laboratory projects will be required. Prerequisite: LING 705. LEC

LING 708 Problems in Linguistic Analysis (3). Practice in applying the techniques of phonological, grammatical, and syntactic analysis learned in introductory linguistics to data taken from a variety of languages of different structural types. Prerequisite: An introductory course in linguistics. LEC

LING 709 First Language Acquisition (3). Introduction to the study of language acquisition: the significant findings, the basic methodological procedures, and some of the more recent theoretical accounts. Not open to students who have taken LING 425. Prerequisite: An introductory course in linguistics. LEC

LING 712 Phonology I (3). This course is an introduction to phonological theory. It focuses on crucial phonological concepts such as underlying and surface representations, phoneme and allophone, contrast, alternation, neutralization, distinctive features, and syllable. It provides the basic skill set for phonological analysis, including UR selection, rule notation, rule ordering, and common phonological universals. It also touches on theory-building in phonology, with discussions on the external motivations for phonological grammar. It also lays out the predictions of a theoretical proposal, and how phonological predictions can be empirically tested. Prerequisite: LING 705. LEC

LING 714 Phonology II (3). This course is a continuation of a survey of phonological theory. The course starts with the discussion of the conspiracy and duplication problems in rule-based phonology and works its way to Optimality Theory. Topics in Optimality Theory (OT) include its conceptual and empirical advantages over rule-based phonology, its potential problems and possible remedies, issues of learnability and acquisition, the relevance of phonetics in OT constraints, and correspondences to phonology. Prerequisite: LING 715. LEC

LING 715 Linguistics and Second Language Acquisition (3). Introduction to the study of second language acquisition: The application of theoretical linguistics to the description of the language a learner acquires, and to the process of acquisition. Prerequisite: An introductory course in linguistics. LEC

LING 716 Second Language Acquisition (3). This advanced course will provide in-depth reading and discussion of several current topics including second language acquisition within a generative framework, processing approaches to second language acquisition, and the role of input and learnability principles in second language acquisition. Both theoretical and methodological issues will be discussed. Prerequisite: LING 715. LING 725, which may be taken concurrently, or permission of instructor. LEC

LING 720 Research Methods in Linguistics (3). This course provides a foundation for designing, conducting, and critically evaluating quantitative and qualitative research in the language sciences. Topics include formulating a research hypothesis, participant selection, ethical considerations, research design, scientific method, validity, reliability, data collection, dependent and independent variables, descriptive and inferential statistics. This course will serve students who are interested in the basics of research design and statistics for the study of language. Prerequisite: An introductory course in linguistics. LEC

LING 722 Linguistic Typology (3). Different languages use different linguistic mechanisms to encode meanings. This course surveys grammatical concepts and categories found in the world’s languages including tense, aspect, mood, voice, person, and number as well as case relations such as nominative, accusative, ergative, and abilitative. Basic word order types and phonological phenomena such as topic, focus, and cohesion are introduced. Examples will be drawn from a wide variety of languages to illustrate how the same concept may be encoded differently, morphologically, syntactically, phonologically, etc.

Prerequisite: An introductory course in linguistics. LEC

LING 725 Syntax I (3). The basics of theoretical syntax, examining the principles of universal grammar. Topics include phrase structure, relations among syntactic constituents, and the nature of syntactic rules and lexical categories. Prerequisite: An introductory course in linguistics. LEC

LING 726 Syntax II (3). An advanced course covering one or more current theories of syntax. The course will provide in-depth reading and discussion on the major areas of syntactic theory including universal grammar, phrase structure theory, lexical incorporation, recursion and type, binding, coordination, negation, quantification, and the relation between syntax and the semantic module. Prerequisite: LING 725. LEC

LING 727 Morphology (3). An exploration of several topics in word structure and formation. Covers three broad topics: traditional morpho-syntax, and morpho-syntactic phenomena. Morphology deals with phonological constraints on morphological processes and prosodic morphotactics. Morpho-syntactic phenomena include syntactic and semantic properties of grammatical phenomena and interaction of syntactic processes and morphology. The course has a strong emphasis on current research in generative morphology. Prerequisite: LING 725, LING 727, or permission of instructor. LEC

LING 730 Linguistics in Anthropology (3). The study of language as it concerns anthropology. Language systems in relation to culture, language taxonomy, semantology, and ethnolinguistics, and some aspects of psycholinguistics. Prerequisite: Completion of three courses in linguistics or permission of instructor. LEC

LING 731 Semantics (3). A study of meaning in natural language usage. Emphasis on referential semantics. Set theory, propositional and first-order logic, and intensional and modal logic as they relate to nature. Questions that arise in representing the meanings of natural language sentences in a formalized language. Prerequisite: LING 725. LEC

LING 735 Psycholinguistics (3). A detailed examination of issues in the processing of language. The course will provide a survey of research and theory in psycholinguistics, reflecting the influence of linguistic theory and experimental psychology. Spoken and written language comprehension and language production processes will be examined. (Same as PSYC 737.) Prerequisite: PSYC 735 or consent of instructor. LEC

LING 737 Topics in Psycholinguistics (3). An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, written language processing, neurolinguistics, prosody, and syntactic processing. (Same as PSYC 737.) Prerequisite: PSYC 735 or consent of instructor. LEC

LING 738 Neurolinguistics (3). We will explore how language is represented and processed in the human brain. This will include a critical survey of the foundations and the newest state-of-the-art research in the cognitive neuroscience of language, focusing on the techniques of functional brain imaging (fMRI, PET, EEG, MEG, and related methods), and research on aphasia and other language disorders. This course will also include a laboratory component providing hands-on experience with brain imaging research on language. Prerequisite: LING 705 or LING 712 or LING 725 or LING 731. LEC

LING 739 The Acquisition of Morphosyntax (3). A second semester course in child language which explores the acquisition of morphology, syntax and the ways in which morphology and syntax interact in linguistic theory and language development. Topics covered in the course include agreement, case, null subjects, question formation, pronominal binding, quantification, and control. LEC

LING 740 Linguistic Data Processing (3). The tools and techniques necessary to analyze linguistic fieldwork data, including research design, recording and elicitation techniques, computation, data processing and analysis. Techniques of research, field recording, and data analysis technology. Methods of phonetic transcription, grammatical annotation, and analysis of language context. Practice of techniques via short studies of at least one language. (Same as ANTH 740.) Prerequisite: LING 705 or permission of instructor. LEC

LING 741 Field Methods in Linguistic Description (3). The elicitation and analysis of phonological, grammatical, and discourse data from a language consultant. In-depth research on one language. Techniques of research design, methods of phonological transcription, grammatical annotation, and analysis of language context. (Same as ANTH 741.) Prerequisite: LING 705 or permission of instructor. LEC

LING 747 North American Indian Languages (3). Introduction to the nature and distribution of North American Indian languages. Prerequisite: An introductory course in linguistics. LEC

LING 748 Language Contact (3). Theories and case studies of languages in contact. Areal and genetic linguistics, genesis of pidgins and creoles, multilingualism.
Social, political, economic, and geographic factors in language change. (Same as ANTH 749.) Prerequisite: A course in Linguistics. LEC

LING 749 Linguistics and Ethnolinguistics of China and Central Asia: ______ (3). Selected topics in Linguistics and Linguistic Anthropology, focusing on dominant and/or minority languages of China, Central Asia, or a particular region of Central and Eastern Eurasia. Topics may include any subfield of linguistics, including language contact, typology, dialectology, and sociolinguistics. Topic for semester to be announced. (Same as ANTH 749.) Prerequisite: A course in Linguistics. LEC

LING 750 Comparative and Historical Linguistics (3). Genetic and typological classification of languages, change in phonological and morphological systems, the development of writing and interpretation of written evidence, reconstructive methodology. Prerequisite: Six hours of linguistics, including phonetics. LEC

LING 753 The Indo-European Language Family (3). A survey of the Indo-European language family: its members, divisions, and history; with an introduction to comparative grammar and a history of scholarship in the field. Prerequisite: LING 700 and a reading knowledge of French or German. LEC

LING 782 Research Methods in Child Language (3). A survey of methods for studying phonological, morphological, syntactic, and semantic change during language development. Methods include: diary interpretation, language sample analysis, probe elicitation tasks, and clinical assessment. (Same as PSYC 782.) Prerequisite: LING 735 or equivalent or consent of instructor. LEC

LING 783 Computational Linguistics (3). A survey of computer-based approaches to the study of phonology, morphology, and syntax. In addition to its relevance for basic linguistic research, computer-based work on phonology is central to current research in speech analysis, speech synthesis, and the major artificial intelligence effort described as speech understanding. Computer-based morphological analysis is of theoretical interest to the linguist as well as a major component in content analysis, information retrieval, and other related application areas. Computer-based parsers and syntactic/string generators provide model testers for the linguist and analytical tools for the computer scientist concerned with language applications. Prerequisite: An introductory linguistics course. LEC

LING 791 Topics in Linguistics: ______ (1-3). The content and prerequisites of this course will vary. May be repeated. Prerequisite: Consent of instructor. LEC

LING 794 Proseminar (3). Introduction to the field of linguistics. Topics include research literature and research methods, thesis and grant writing, and ethics in linguistic research. Required for all first-year graduate students in linguistics. Graded on satisfactory/unsatisfactory basis. LEC

LING 799 Proseminar in Child Language (2). A review and discussion of current issues in child language acquisition. May be repeated for credit. Students are graded S/E. (Same as ABSC 797, PSYC 797 and SPLH 799). (Formerly HDFL 797.) LEC

LING 810 Seminar in Ethnolinguistics: ______ (2-3). An advanced study of the relations between language and culture. Subject will vary each semester. Students may repeat the course more than once. (Same as ANTH 810.) LEC

LING 822 Seminar on Acquisition of Language (3). An analysis of recent theoretical issues and research problems in the study of children’s acquisition of language. LEC

LING 850 Advanced Comparative and Historical Linguistics (3). Mechanisms of linguistic change, syntactic change and reconstruction, distant genetic relationships and comparisons, advanced problems in internal and comparative reconstruction, language and prehistory. Prerequisite: LING 750 or LING 753. LEC

LING 860 Seminar in Second Language Acquisition (3). Analysis of recent theoretical and methodological issues in the study of second language acquisition. Prerequisite: LING 710 or permission of instructor. LEC

LING 899 Master's Thesis (1-12). THE

LING 910 Linguistic Seminar: ______ (1-3). The content and prerequisites of this course will vary. May be repeated. LEC

LING 947 Seminar in Amerindian Linguistics (1-3). The aim of the seminar is to provide opportunity for interaction among faculty and students sharing an interest in North American Native languages and linguistics. Activities include reading, discussion, and criticism of literature on Amerindian languages and linguistics, and reports on current research of the participants. May be repeated. Prerequisite: LING 747. LEC

LING 950 Seminar in Comparative and Historical Linguistics (3). Intensive study of varying topics in this area. May be repeated. Prerequisite: LING 750. LEC

LING 960 Seminar in Applied Linguistics: ______ (3). The content and prerequisites of this course will vary. LEC

LING 970 The Structure of: ______ (2-3). A detailed study of the phonological and grammatical structure of a language not regularly taught at the University. Primarily for students who want a linguistic knowledge of the language rather than a practical command of it. Prerequisite: Two courses in linguistics. LEC

LING 980 Linguistics Field Work (3-6). Independent field work with an informant on a language not normally offered at the University of Kansas, or on a non-standard di

Mathematics

Chair: Jack Porter
Snow Hall, 1460 Jayhawk Blvd., Room 405
Lawrence, KS 66045-7514, www.math.ku.edu, (785) 864-3651
Graduate Director: Rodolfo Torres, 546 Snow Hall, (785) 864-3651
Professors: Bayer, Brown, Duncan, Fleissner, Galvin, Hu, Huang, Huneke, Katz, Lang, Lerner, Mandal, Nualart, Paschke, Pasik-Duncan, Porter, Roitman, Sheu, Stahl, Torres, Van Vleck, Xu
Associate Professors: Gavosto, Gay, Kachi, Liu, Purnaprajna, Reihani, Stanislavova, Stefanov
Assistant Professors: Dao, Feng, He, Martin, Oh, Talata

The department offers a graduate program leading to both the M.A. and Ph.D. degrees. A broad range of programs is possible in algebra, analysis, combinatorics, control theory, dynamical systems, geometry, numerical analysis, probability, statistics, partial differential equations, set theory, and topology.

The Department of Mathematics has a long tradition of excellence. The first Ph.D. granted at KU was in mathematics in the year 1895. Since then, the graduate program has been a central part of the department’s research and teaching mission and an important component of its long-term planning. The department’s commitment to graduate education has boosted its recent growth in size and enhanced its reputation. Prospective students are encouraged to read additional information at www.math.ku.edu/academics/graduate.html.

Admission

The minimum prerequisites for admission are an undergraduate degree from an accredited institution with a program of study in mathematics and a record of achievements that shows strong promise of success in graduate school. A 3.0 cumulative grade-point average in undergraduate studies and a 3.0 grade-point average in mathematics are required for admission. A prospective student should have taken courses in mathematics at the undergraduate level in abstract algebra, linear algebra, and advanced calculus or introduction to analysis. Such courses should be comparable to KU courses numbered MATH 500, MATH 558, and MATH 590. It is also beneficial to students if they have minimum preparation in probability/statistics or numerical analysis (like KU courses MATH 627/MATH 628 and/or MATH 581).

We also recommend that you take introductory courses in complex analysis, differential equations, and/or topology before

Forty-three KU students have won Goldwater Scholarships for excellence in science and mathematics since the award was established in 1989.

Students in mathematics can design programs with emphases ranging from one of the fields of pure mathematics to one of the fields of applied mathematics and statistics.
considering graduate work in mathematics at KU (see for example KU courses numbered MATH 646 and MATH 647). The department requires the general Graduate Record Examination for all incoming students. International students whose native language is not English also must fulfill English language requirements specified by university policies. Applicants must submit an application form online at web. graduate.ku.edu. In addition the following materials are required for application: Official transcript from each college or university the applicant has attended, applicant’s resume/curriculum vitae, a list of the textbooks used in the mathematics courses beyond the calculus level that the applicant has taken, a statement of purpose indicating the applicant’s mathematical preferences and interests. The applicant should also arrange to have three letters of recommendation sent directly to the Department of Mathematics. Official GRE scores and official Test of English as a Foreign Language scores must be sent to the department.

All these application materials should be sent to

The University of Kansas
Department of Mathematics, Graduate Admissions Director
Snow Hall, 1460 Jayhawk Blvd., Room 405
Lawrence, KS 66045-7514

Incomplete applications will not be considered. The minimum admission requirements do not guarantee admission. The graduate committee of the Department of Mathematics evaluates candidates and makes recommendations to the Office of Research and Graduate Studies regarding admission. The number of students admitted to the program changes from year to year, and admissions are competitive based on all application materials.

There are no additional application forms for financial support. Students are considered for support based on merit. Most of the students accepted by the program receive an offer of financial support in the form of a Graduate Teaching Assistantship. The number of GTAs available is limited. For further information about applications and admission, please visit www.math.ku.edu/academics/graduate/graduate-admissions.html.

M.A. Degree Requirements
The M.A. program is flexible and accommodates the different interests and backgrounds of students. Some of the courses required for the M.A. are common to the Ph.D. tracks, and we encourage students interested in an M.A. to take advanced Ph.D. classes among their selective course work. Many Ph.D. students earn an M.A. on the way to the doctoral degree. They have the option to do so after completing the qualifying examinations.

A candidate for the M.A. must fulfill general requirements. At least 30 hours of appropriate graduate credit must be earned with at least a B average, and a research component must be included in the candidate’s program. Usually the research component is fulfilled by writing a thesis or by completing appropriate seminars, independent research, or advanced graduate courses. In addition, a candidate must complete one of these options:

Option 1. Pass the departmental Ph.D. written qualifying examinations and complete 30 hours of courses at the 700 level or higher, of which 12 hours are at the 800 level or higher.

Option 2. Complete the following courses and pass an oral examination: MATH 800, MATH 810, MATH 820, MATH 830, MATH 831, and at least 9 of the remaining 15 hours from courses numbered 700 or above. The additional 9 hours may include the credit (a minimum of 2 hours and a maximum of 6 hours) used to fulfill a research component (e.g., enrollment in MATH 896, MATH 899, MATH 990, MATH 993, or advanced courses). An M.A. candidate must demonstrate an ability to communicate mathematics both orally and in written form. An M.A. candidate not selecting the thesis option (MATH 899) is expected to write a technical report as part of his or her research component. A candidate must give a short (30 to 60 minutes) presentation of her or his research in the first part of the oral examination.

Option 3. Complete 36 credit hours of courses numbered 600 or above. Complete MATH 727, MATH 765, MATH 781, MATH 790, and MATH 791. Complete a research component and pass an oral examination. At least 24 of the 36 hours must be in courses numbered 700 or above. Course equivalents to MATH 727, MATH 765, MATH 781, MATH 790, or MATH 791 may be substituted if approved by the graduate studies committee. An M.A. candidate may, with prior approval of the chair of the graduate studies committee, substitute up to 9 hours of courses taught in other departments. Also, the 36 hours may include the credit (a minimum of 2 hours and a maximum of 6 hours) used to fulfill a research component (e.g., enrollment in MATH 896, MATH 899, MATH 990, MATH 993, or advanced courses). An M.A. candidate must demonstrate an ability to communicate mathematics both orally and in written form. In particular, an M.A. candidate not selecting the thesis option (MATH 899) is expected to write a technical report as part of his or her research component. Also, a candidate must give a short (30 to 60 minutes) presentation of her or his research in the first part of the oral examination. A proposed program of study must be submitted to the chair of the graduate studies committee at the earliest feasible time, preferably during the second semester of enrollment. The degree is awarded only on the basis of an approved program, which can, however, be revised.

Ph.D. Degree Requirements
In addition to general requirements, the department requires the student to meet the following requirements before being admitted to the comprehensive examination.

1. Pass written qualifying examinations, one in algebra, one in analysis, and one in either numerical analysis or probability and statistics. The qualifying examinations must be completed by the beginning of the student’s fifth semester.

2. Pass one preliminary examination in an area close to the focus of the eventual doctoral dissertation. The preliminary examination must be completed by the beginning of the student’s eighth semester.

3. Satisfy the research skills requirement by demonstrating a reading ability in one of four languages—Chinese, French, German, or Russian—and a working knowledge of a programming language such as C++ or FORTRAN

4. Pass a set of required courses, differing in different tracks.

Pure Mathematics. This track requires MATH 800, MATH 810, MATH 820, MATH 830, and an approved course in geometry (e.g., MATH 840, MATH 910, or MATH 920).

A KU mathematics professor won a national award from the Mathematical Association of America for his narrative account of how mathematicians solved a problem that confounded them for 79 years.
Applied Mathematics. This track requires MATH 727 (or the corresponding qualifying examination); MATH 781 (or the corresponding qualifying examination); MATH 800; MATH 810; MATH 881 and MATH 882 or MATH 865 and MATH 866 or MATH 850 and MATH 851; and one of MATH 840, MATH 850, or MATH 950.

Normally the work required to prepare a student for the oral comprehensive examination (and to do research) includes one or more semesters of advanced courses, directed readings, and seminars. In the oral comprehensive examination, a student must show proficiency in the chosen area of mathematics. Precise areas of responsibility on this examination are discussed in detail with the advisory committee (the student’s adviser and two other members of the department’s Graduate Faculty).

The student must complete four additional courses at the 800 level or above before the final examination. Mathematics courses at the 700 level, or courses outside the department at the 700 level or higher, may be substituted with the approval of the graduate studies committee.

Mathematics Courses
MATH 500 Intermediate Analysis (3).
MATH 510 Introduction to the Theory of Computing (3).
MATH 520 Intermediate Mathematical Logic (3).
MATH 526 Applied Mathematical Statistics I (3).
MATH 530 Mathematical Models I (3).
MATH 531 Mathematical Models II (3).
MATH 540 Elementary Number Theory (3).
MATH 542 Vector Analysis (2).
MATH 558 Introductory Modern Algebra (3).
MATH 559 Modern Geometries (3).
MATH 562 Evolution of Mathematical Thought (3).
MATH 570 Undergraduate Honor Seminar (3).
MATH 581 Numerical Methods (3).
MATH 590 Linear Algebra I (3).
MATH 591 Applied Numerical Linear Algebra (3).
MATH 596 Special Topics: __________ (1-3).
MATH 601 Algebraic Coding Theory (3).
MATH 605 Applied Regression Analysis (3).
MATH 611 Time Series Analysis (3).
MATH 624 Discrete Probability (3).
MATH 627 Probability (3).
MATH 628 Mathematical Theory of Statistics (3).
MATH 631 Operations Research (3).
MATH 646 Complex Variables and Applications (3).
MATH 647 Applied Partial Differential Equations (3).
MATH 648 Calculus of Variations and Integral Equations (3).
MATH 660 Geometry I (3).
MATH 661 Geometry II (3).
MATH 696 Special Topics: __________ (1-3).
MATH 699 Directed Reading (1-3).
MATH 701 Topics in Mathematics for Teachers: ______ (1-6). Material, including both mathematical content and teaching methodology, related to classroom use at various levels, elementary through secondary. Topics may vary. May not be counted for junior-senior credit towards a major in mathematics, nor for graduate credit towards a graduate degree in mathematics. Prerequisite: Permission of instructor. RSH
MATH 715 Sampling Techniques (3). Statistical methodology of survey sampling. Data analysis and estimation methods for various experimental designs; fixed or random sample sizes, pre-and/post-stratified samples, and multistage sampling. Estimates of totals, means, ratios and proportions with methods of estimating variances of such estimates. Prerequisite: A post-calculus probability or statistics course. LEC
MATH 717 Nonparametric Statistics (3). Methods requiring few assumptions of such estimates. Prerequisite: MATH 627 and some knowledge of control. LEC
MATH 722 Mathematical Logic (3). Propositional calculus. First order theories and model theory. Elementary arithmetic and Godel’s incompleteness theorems. (Same as Eecs 722.) Prerequisite: MATH 665 or MATH 691, or equivalent evidence of mathematical maturity. LEC
MATH 724 Combinatorial Mathematics (3). Counting problems, with an introduction to Polya’s theory; Motzkin’s functions; transversal theory; Ramsey’s theorem; Sperner’s theorem and related results. LEC
MATH 725 Graph Theory (3). Graphs; trees; connectivity; Menger’s theorem; eulerian and hamiltonian graphs; planarity; coloring of graphs; factorization of graphs; matching theory; alternating chain methods; introduction to matroids with applications to graph theory. LEC
MATH 727 Probability Theory (3). A mathematical introduction to premeasure-theoretic probability. Topics include: probability spaces, distributions and independent events, random variables and probability distributions, special discrete and continuous distributions with emphasis on parametric families used in applications, the distribution problem for functions of random variables, sequences of independent random variables and laws of large numbers, and the central limit theorem. Prerequisite: MATH 123 or equivalent. LEC
MATH 728 Statistical Theory (3). N Theory of point estimation and hypothesis testing with applications. Confidence region methodologies and relations to estimators and testing. Prerequisite: MATH 727 or equivalent. LEC
MATH 735 Introduction to Optimal Control Theory (3). An introduction to the mathematical methods of deterministic control theory is given by considering some specific examples and the general theory. The methods include dynamic programming, the calculus of variations, Pontryagin’s maximum principle. Various problems of linear control systems, e.g., the linear regulator problem, are solved. Prerequisite: MATH 320 or equivalent. LEC
MATH 740 Number Theory (3). Divisibility, the theory of congruences, primitive roots and indices, the quadratic reciprocity law, arithmetic functions and miscellaneous additional topics. Prerequisite: MATH 123 or equivalent. LEC
MATH 750 Stochastic Adaptive Control (3). Stochastic adaptive control methods. Stochastic processes such as Markov chains and Brownian motion, stochastic integral, differential rule, stochastic differential equations, martingales and estimation techniques. Identification and control of discrete and continuous time linear stochastic systems. Specific applications and simulation results of stochastic adaptive control theory. Prerequisite: MATH 627 and some knowledge of control. LEC
MATH 765 Introduction to the Theory of Functions I (3). A continuation of MATH 764 and MATH 766 are theoretical courses on the fundamental concepts of analysis and the methods of proof. These two courses include the concept of a real number; limits, continuity, and uniform convergence; derivatives and integrals of functions of one and of several real variables. Prerequisite: MATH 123 or equivalent. LEC
MATH 766 Introduction to the Theory of Functions II (3). A continuation of MATH 765. Prerequisite: MATH 765. LEC
MATH 780 Numerical Analysis of Linear Systems (3). Computational aspects of linear algebra, linear equations and matrices, direct and indirect methods, eigenvalues and eigenvectors of matrices, error analysis. Prerequisite: MATH 590 and MATH 781. LEC
MATH 781 Numerical Analysis I (3). Finite and divided differences. Interpolation, numerical differentiation, and integration. Gaussian quadrature. Numerical integration of ordinary differential equations. Curve fitting. (Same as Eecs 781.) Prerequisite: MATH 520 and knowledge of a programming language. LEC
MATH 782 Numerical Analysis II (3). Direct and iterative methods for solving systems of linear equations. Numerical solution of partial differential equations. Numerical determination of eigenvectors and eigenvalues. Solution of nonlinear equations. (Same as Eecs 782.) Prerequisite: MATH 781. LEC
MATH 783 Applied Numerical Methods for Partial Differential Equations (3). Finite difference methods applied to particular initial-value problems (both parabolic and hyperbolic), to illustrate the concepts of convergence and stability and to provide a background for treating more complicated problems arising in engineering and physics. Finite difference methods for elliptic boundary-value problems, a discussion of convergence and methods for solving the resulting algebraic system. Variational methods for elliptic problems. Prerequisite: MATH 647 or equivalent. LEC
MATH 790 Linear Algebra II (3). A theoretical course on the fundamental concepts and theorems covered in MATH 790. Additional topics include: vector space, basis, dimension, subspace, norm, inner product, Banach space, Hilbert space, orthonormal basis, positive definite matrix, minimal polynomial, diagonalization and other canonical forms, Cayley-Hamilton theorem, dual, and quotient space. Prerequisite: MATH 790. LEC
MATH 791 Modern Algebra I (3). This course, together with MATH 792, includes the following topics: the number system; groups, rings and fields; matrices and linear transformations; lattices; Galois theory; linear algebras. Prerequisite: MATH 123 or equivalent. LEC
MATH 792 Modern Algebra II (3). Continuation of MATH 791. Prerequisite: MATH 791. LEC
MATH 796 Special Topics: ______ (1-3). Arranged as needed to present appropriate material for groups of students. May be repeated for credit. Prerequisite: Variable. LEC
MATH 799 Directed Readings (1-3). Directed readings on a topic chosen by the student and agreed to by the instructor. May be repeated for additional credit. Consent of the department required for enrollment. RSH
MATH 800 Theory of Functions of a Complex Variable (3). Cauchy’s theorem and the residue calculus; contour integration; the argument principle; maximum modulus principle; Schwarz symmetry principle; analytic continuation; monodromy theorem; applications to the gamma function and Riemann’s zeta function; entire and meromorphic functions; conformal mapping; Riemann mapping theorem; univalent functions. Prerequisite: MATH 766 or concurrently with MATH 766. LEC
MATH 801 Theory of Functions of a Complex Variable (3). Continuation of MATH 800. LEC
MATH 802 Set Theory (3). Axiomatic set theory; transfinite induction; regularity and choice; ordinal and cardinal arithmetic; miscellaneous additional topics (e.g., extra axioms such as GCH or MA; infinite combinatorics; large cardinals). Prerequisite: MATH 765 or MATH 791, or concurrent enrollment in MATH 765 or MATH 791, or equivalent evidence of mathematical maturity. LEC
MATH 811 Theory of Functions of a Real Variable (3). Continuation of MATH 810. LEC
MATH 820 Introduction to Topology (3). General topology: Set theory; topological spaces; connectedness and compactness; product and quotient spaces; embedding in cubes; metric spaces and metrization; compact spaces; function spaces. Prerequisite: MATH 765. LEC
MATH 821 Introduction to Geometric and Algebraic Topology (3). The fundamental group (including classification); compact surfaces; homotopy theory, computations (including homotopy invariance) and applications (including Brouwer fixed point theorem); introduction to cohomology theory. Prerequisite: MATH 792. LEC
MATH 822 Algebraic Topology (3). Review of simplicial homology; Lefschetz fixed point theorem and degree theory; singular, cellular, and axiomatic homology; Jordan Brouwer separation theorems; universal coefficient theorems, products in cohomology, homotopy groups, and the Hurewicz Theorem. Prerequisite: MATH 821. LEC
MATH 830 Introduction to Lie Groups (3). A study of some structures, theorems, and techniques in algebra whose use has become common in many branches of mathematics. Prerequisite: MATH 792. LEC
MATH 831 Abstract Algebra (3). Continuation of MATH 830. Prerequisite: MATH 830. LEC
MATH 840 Differentiable Manifolds (3). Multilinear algebra of finite dimensional vector spaces over fields; differentiable structures and tangent and tensor bundles; differentiable mappings and differentials; exterior differential forms; curves and surfaces as differentiable manifolds; affine connections and covariant differentiation; Riemannian metric. Prerequisite: MATH 745 and MATH 792. LEC
MATH 850 Differential Equations and Dynamical Systems (3). Discrete and differentiable dynamical systems with an emphasis on the qualitative theory. Topics to be covered include review of linear systems, existence and uniqueness theorems, flows and discrete systems, bifurcations, theory of dynamical systems, sensitive dependence on initial conditions and the invariant manifold, stable and unstable manifolds, Poincare sections, normal forms, Hamiltonian systems, and an introduction to bifurcation theory and chaos. LEC
MATH 851 Topics in Dynamical Systems (3). Topics to be covered include complex dynamical systems, perturbation theory, nonlinear analysis of time series, chaotic dynamical systems, and numerical methods as dynamical systems. This course may be repeated for credit. LEC
MATH 865 Introduction to Stochastic Processes (3). Markov chains; Markov processes; diffusion processes; stationary processes. Emphasis is placed on applications: random walks; branching theory; Brownian motion; Poisson process; birth and death processes. Prerequisite: MATH 627 and MATH 765. LEC
MATH 866 Stochastic Processes II (3). This is a second course in stochastic processes, focused on stochastic calculus with respect to a large class of semi-martingales and its applications. Topics include: stochastic calculus (linear FDE), first passage times, Brownian motion, and statistics. The course will start with basic properties of martingales and random walks and then develop into the core program on Itô’s stochastic calculus and stochastic differential equations. These techniques provide useful and important tools and models in many pure and applied areas. Prerequisite: MATH 727 and MATH 865. LEC
MATH 870 The Analysis of Variance (3). The general linear hypothesis with fixed effects; the Gauss-Markov theorem, confidence ellipsoids, and tests under normal theory; multiple comparisons and the effect of departures from the underlying assumptions; analysis of variance for various experimental designs and analysis of covariance. Prerequisite: MATH 628 and either MATH 590 or MATH 792. LEC
MATH 872 Multivariate Statistical Analysis (3). The multivariate normal distribution; tests of hypotheses; multivariate means and covariance matrices; estimation; correlation; multivariate analysis of variance; principal components; canonical correlation. Prerequisite: MATH 628 and either MATH 590 or MATH 792. LEC
MATH 874 Statistical Decision Theory (3). Game theory, admissible decision functions and complete class theorems; Bayes and minimax solutions; sufficiency; invariance; multiple decision problems; sequential decision problems. Prerequisite: MATH 628 and MATH 766. LEC
MATH 881 Advanced Numerical Linear Algebra (3). Advanced topics in numerical linear algebra including pseudo-spectra, rounding error analysis and perturbation theory, numerical methods for problems with special structure, and numerical methods for large scale problems. Prerequisite: MATH 781, 782, 790, or permission of the instructor. LEC
MATH 882 Advanced Numerical Differential Equations (3). Advanced course in the numerical solution of ordinary and partial differential equations including modern numerical methods and the associated error analysis. Prerequisite: MATH 781, 782, 783, or permission of the instructor. LEC
MATH 896 Master’s Research Component (1-6). RSH
MATH 899 Master’s Thesis (1-10). THE
MATH 905 Several Complex Variables (3). Holomorphic functions in several complex variables, Cauchy’s integral for poly-discs, multivariable Taylor series, maximum modulus theorem. Further topics may include: removable singularities, extension theorems, Cauchy-Riemann operator, domains of holomorphy, special domains and algebraic properties of rings of analytic functions. Prerequisite: MATH 800. LEC
MATH 910 Algebraic Curves (3). Algebraic sets, varieties, plane curves, morphisms and rational maps, resolution of singularities, Riemann-Roch theorem. Prerequisite: MATH 791 and MATH 792. LEC
MATH 915 Introduction to Homological Algebra (3). Homological algebra, homological dimension, chain complexes and derived functors (including Tor and Ext). Prerequisite: MATH 830 and MATH 831, or consent of instructor. LEC
MATH 920 Lie Groups and Lie Algebras (3). General properties of Lie groups, closed subgroups, one-parameter subgroups, homogeneous spaces, Lie bracket, Lie algebras, exponential map, structure of semi-simple Lie algebras, invariant forms, Maurer-Cartan equation, covering groups, spinor groups. Prerequisite: MATH 791 and MATH 820. LEC
MATH 930 Topics in General Topology (3). Paracompact spaces, uniform spaces, topology of continua, Peano spaces, Hahn-Mazurkiewicz theorem, dimension theory, and theory of retracts. Prerequisite: MATH 820. LEC
MATH 940 Advanced Probability (3). Probability measures, random variables, distribution functions, characterization, functions, types of convergence, central limit theorem. Laws of large numbers and other limit theorems. Conditional probability, Markov processes, and other topics in the theory of stochastic processes. Prerequisite: MATH 811. LEC
MATH 950 Partial Differential Equations (3). Introduction; equations of mathematical physics, classification of linear equations and systems. Existence and uniqueness problems for elliptic, parabolic, and hyperbolic equations. Eigenvalue problems for elliptic operators; numerical methods. Prerequisite: MATH 766. LEC
MATH 961 Functional Analysis (3). Continuation of MATH 960. LEC
MATH 963 C*-Algebras (3). The basics of C*-algebras, approximately finite dimensional C*-algebras, irrational rotation algebras, C*-algebras of isometries, group C*-algebras, crossed products C*-algebras, extensions of C*-algebras and the BDF theory. Prerequisite: MATH 811 or MATH 960, or consent of instructor. LEC
MATH 970 Analytic K-Theory (3). K0 for rings, spectral theory in Banach algebras, K1 for Banach algebras, Bott periodicity and six-term cyclic exact sequence. Prerequisite: MATH 792 and MATH 960. LEC
MATH 100 Seminar: (1-10). LEC
MATH 103 Readings in Mathematics (1-10). RSH
MATH 109 Special Topics: (1-10). Advanced courses on special topics; given as need arises. Prerequisite: Variable. LEC
MATH 1099 Doctoral Dissertation (1-10). THE

Media Studies
See Film and Media Studies in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

Museum Studies
See Biological Sciences: Molecular Biosciences.

Microbiology
See Biological Sciences: Molecular Biosciences.

Museum Studies
Director: Marjorie Swann, museumstudies@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 208
Lawrence, KS 66045-7545
http://museumstudies.ku.edu, (785) 864-4543
Museum Studies Faculty Advisory Committee: Hardy (Spencer Museum of Art), Janzen (Anthropology), Lieberman (Geology), Moran (History), D. Smith (Ecology and Evolutionary Biology)
The M.A. program in museum studies provides students with the excellent academic and professional training they need to prepare them for challenging careers in museums, historical agencies, and similar institutions. Students develop both their expertise in an academic discipline—anthropology, ecology, history, or natural history—and their knowledge of the issues and practices central to other museums. Students take advantage of the superb facilities at KU, including the Dole Institute of Politics, Natural History Museum, Spencer Museum of Art, Spencer Research Library, and Wilcox Classical Museum. Cooperative arrangements can also be made with nearby historical agencies, specialized libraries, and museums. A faculty advisory committee administers the program in conjunction with the participating departments (anthropology, ecology and evolutionary biology, geology, and history).
Admission
The applicant must hold a baccalaureate degree and have at least a B (3.0 on a 4.0 scale) grade-point average in previous academic work to be considered for admission to regular graduate status in the program. Admission is based on the applicant’s undergraduate record, letters of recommendation, statement of academic objectives, writing sample, and Graduate Record Examination scores. Acceptance is decided by the faculty advisory committee in consultation with the department responsible for administering the student’s chosen disciplinary concentration. Students may apply to be admitted for either the fall or spring semesters. Submit your application online at www.grad.ku.edu.

All other materials should be submitted directly to

The University of Kansas
Museum Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 208
Lawrence, KS 66047-7545

M.A. Degree Requirements
The M.A. degree in museum studies requires 42 credit hours at the graduate level. Required course work falls into three categories: 18 credit hours of courses in one of the participating academic departments (anthropology, ecology and evolutionary biology, geology, or history); 18 hours of required museum studies courses; and 6 credit hours of supervised internship. Upon satisfactory completion of the required credit hours, a student also must pass a comprehensive formal examination; this exam is usually oral rather than written in format.

Museum Studies Courses

MUSE 701 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented, as appropriate, case studies and a simulated museum organization model. (Same as AMS 731, BIOL 785, GEOL 783, and HIST 728.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 702 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, BIOL 788, GEOL 782, and HIST 720.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 703 Introduction to Museum Exhibits (3). Presentation of principles and practices of exhibit management, design, and production. Topics will include developing a master plan for museum exhibits; concept development; design, installation, and maintenance of exhibits; design theory; design process; label writing and editing; selection of materials architectural requirements and building codes; cost estimating; publicity; security; and exhibit evaluation. Consideration will be given to exhibition problems in public and private museums in the areas of anthropology, art, history, natural history, and technology. (Same as AMS 700, BIOL 787, GEOL 781, and HIST 723.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 704 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. (Same as AMS 730, BIOL 798, GEOL 785, and HIST 725.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 705 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as AMS 797, BIOL 784, GEOL 784, and HIST 721.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 706 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, BIOL 700, GEOL 780, and HIST 722.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 707 Practical Archival Principles (3). Study of the principles and practices applicable to the preservation, care, and administration of archives and manuscripts. Practical experience will be an integral part of this course. (Same as HIST 727.) LEC

MUSE 710 Current Trends in Curation and Collection Management (2). Seminar course to provide students with a working knowledge of the primary issues and current trends in building, administration, and care of scientific collections. Topics include permits, collecting, accessioning, cataloging, preservation, preventive conservation, and access to collections and data. The course format consists of readings, lectures, guest speakers, discussions, and visits to scientific collections on campus. (Same as BIOL 706.) LEC

MUSE 780 Special Topics: (1-3). Advanced courses on special topics in museum studies, given as need arises. Lectures, discussions of readings, and guest speakers. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program or permission of instructor. LEC

MUSE 782 Seminar in Current Museum Topics: (1-2). In-depth examination of specific topics currently of concern to museums and museum professionals. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program, or permission of instructor. LEC

MUSE 790 Advanced Study (1-3). Individual research in a specialized topic not ordinarily treated in a Museum Studies core course for which there is a member of the graduate faculty competent and willing to direct a research project. Prerequisite: Consent of instructor. LEC

MUSE 799 Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection, care, and management, public education, and exhibits with emphasis to suit the particular requirements of each student. (Same as AMS 799, ANTH 799, BIOL 799, GEOL 723, and HIST 799.) FLD

MUSE 930 Materials Conservation (3). Preservation and collection conservation theory and principles, including condition reporting, conservation of furniture and wooden objects, inorganic-based materials, metal objects, organic-based materials, paintings, photographic materials, textiles, three-dimensional objects, and works on paper. LEC

MUSE 930 Preventive Conservation (3). Theory and principles of preventive conservation, with emphasis on its application to storage environment quality, archival supports and housings, basic bookbinding, composite objects, integrated pest management, light and lighting, paper evaluation and mending, temperature, and relative humidity. LEC

MUSE 940 Conservation Assessment (3). Understanding the conservator-curator relationship; principles of conservation assessment, documentation, conservation research, environmental monitoring, handling objects, photographic documentation, and development of a publishable preservation research project. LEC

MUSE 980 Advanced Conservation (3). Application of conservation theory and practice to exhibition development, planning, and preparation; conservation bookbinding; health and safety in conservation; integrated pest management; ethics of conservation; parameters of professional conservation practice. LEC

Neurosciences
For programs in Neurosciences, see the School of Medicine and School of Pharmacy chapters of this catalog.
**Philosophy**

Chair: Ben Eggleston, eggleston@ku.edu  
Wescoe Hall, 1445 Jayhawk Blvd., Room 3090  
Lawrence, KS 66045-7594, www.philosophy.ku.edu, (785) 864-3976  
Graduate Adviser: Dale Dorsey, ddorsey@ku.edu,  
3070 Wescoe Hall, (785) 864-2139  
Professors: Bricke, Cudd, De George, Genova, Marquis, Woelfel  
Professors Emeriti: Cole, Martin  
Associate Professors: Darby, Eggleston, Robertson, Tuozzo  
Assistant Professors: Dorsey, Jenkins  

The department offers graduate programs in philosophy leading to the M.A. and Ph.D. degrees. With the School of Law, the department also offers a joint program in law and philosophy leading to the J.D. in law and the M.A. in philosophy.

**Admission**

Applicants are expected to have taken the following seven courses or their equivalents as preparation for graduate work: symbolic logic, history of ancient philosophy, history of modern philosophy, history of 20th-century analytic philosophy (roughly from Frege to Quine), history of 19th/20th-century Continental philosophy, value theory, and metaphysics/epistemology (broadly construed to include philosophy of language and philosophy of mind). Students may be admitted without some of these courses, but they are expected to make up the deficiencies early in their graduate careers. The department also requires Graduate Record Examination scores (verbal, quantitative, and analytical writing). For more information and detailed application instructions, see the department’s Web site.

Submit your application online at www.graduate.ku.edu.

Send transcripts of all completed college and university course work and all other requested application materials to

The University of Kansas  
Department of Philosophy  
Wescoe Hall, 1445 Jayhawk Blvd., Room 3090  
Lawrence, KS 66045-7594

**M.A. Degree Requirements**

The department offers thesis and nonthesis M.A. options. Both require at least 30 credit hours of graduate work in philosophy with a grade of B or higher. At least 15 of these hours must be in courses numbered 800 or above and, for the thesis option, may include 6 hours of PHIL 899 Master’s Thesis. Students must complete two courses at the 500 level or above (or the equivalent) in each of these areas: history of philosophy, metaphysics and epistemology (broadly construed), and value theory. Courses taken during the undergraduate career may be counted toward these area requirements, but such work does not count toward the overall 30-hour graduate credit requirement unless the student took this course work for graduate credit and it is acceptable to the department. A student also must take PHIL 800 Tutorial in the first year.

For the thesis option, the student must submit an acceptable thesis and pass a two-part oral or written examination including one part covering the material of the M.A. program generally and a second part devoted to a defense of the thesis. For the nonthesis option, the student substitutes 6 hours of acceptable graduate work in philosophy courses numbered 800 or above, excluding PHIL 899. The student must pass an oral examination covering the material of the M.A. program. The nonthesis option can be satisfied also by Ph.D. students who successfully complete PHIL 901 Ph.D. Tutorial. These students must be admitted to the Ph.D. program and satisfy M.A. distribution requirements.

**Joint J.D./M.A. Degree Program**

The joint degree program leading to the J.D. and the M.A. in philosophy develops a student’s understanding and appreciation of the converging disciplines of law and philosophy. The program combines into three years and one summer session the normal three-year J.D. program offered by the School of Law and the three-semester M.A. in philosophy program offered by the Department of Philosophy in the College of Liberal Arts and Sciences. Students complete 81 credit hours in law and 21 credit hours in philosophy. The J.D. and M.A. diplomas are awarded concurrently after completion of joint degree program requirements.

**Admission.** The program is open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records indicate that they have the capacity to complete the program. Applicants must meet the admission requirements of the School of Law and the Department of Philosophy. They must apply and be admitted to each school separately before entering the first year. The Law School Admission Test is the only required entrance examination for School of Law applicants. All admission requirements (except Graduate Record Examination scores) and prerequisites for the philosophy graduate program also apply. A student who decides to enter the program while enrolled in the first year of the J.D. or M.A. in philosophy must consult and obtain approval from the School of Law, the Department of Philosophy, and the College of Liberal Arts and Sciences. No student may enter the combined program after completing more than 30 credit hours in the law school or 12 hours in the Department of Philosophy.

**Typical Enrollment Pattern for J.D./M.A. Program**

<table>
<thead>
<tr>
<th>First Year</th>
<th>32 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law courses</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>10</td>
</tr>
<tr>
<td>Second Year</td>
<td>28 credit hours</td>
</tr>
<tr>
<td>Law courses</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>6</td>
</tr>
<tr>
<td>Third Year</td>
<td>31 credit hours</td>
</tr>
<tr>
<td>Law courses</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>9</td>
</tr>
<tr>
<td>Summer Session</td>
<td>11 credit hours</td>
</tr>
<tr>
<td>Law courses</td>
<td>5</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>6</td>
</tr>
</tbody>
</table>

**Joint J.D./M.A. Degree Requirements**

| Law courses required of all J.D. candidates | 44 |
| Law courses required for joint degree candidates | 9 |
| Philosophy courses required for joint degree candidates | 9 |
| Additional law courses | 28 |
| Additional philosophy courses | 12 |

**Total minimum credit hours required** | 102

It is essential for the student to consult the director of graduate studies in philosophy and a representative of the School of Law about specific courses required or recommended for this program.

For additional information, see the School of Law Catalog and the General Information chapter of this catalog, or write to the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 W. 15th St., Lawrence, KS 66045-7577, or the University of Kansas, Director of Graduate Programs, Department of Philosophy, Wescoe Hall, 1445 Jayhawk Blvd., Room 3090, Lawrence, KS 66045-7594.

For a detailed description, see the Guidelines and Information for Graduate Students available in the Department of Philosophy.

**Ph.D. Degree Requirements**

A student preparing for a doctorate in philosophy must meet general requirements and, before officially enrolling in PHIL 999 Dissertation, must satisfy these special requirements:

1. **Overall Hours Requirement:** Complete at least 48 credit hours of graduate work in regular philosophy courses numbered 500 or above with grades in each course of at least B and an overall grade-point average higher than B in all graduate philosophy courses. At least 24 of these hours must be at the 800
level or above (including PHIL 800 Tutorial and PHIL 901 Ph.D. Tutorial). Beyond the 48 hours and PHIL 999 Dissertation, additional hours are required as appropriate, in accordance with general and departmental rules.

2. Complete PHIL 800 Tutorial with a grade of B or higher, typically in the second semester of enrollment.

3. Formal Philosophy Requirement: Complete PHIL 610 Symbolic Logic or PHIL 666 Rational Choice Theory with a grade of B or higher.

4. Ph.D. Distribution Requirement: Students must complete at least seven courses from the areas below; 500- and 600-level courses are listed as prerequisite options after 800-level seminars.

**Metaphysics and Epistemology (two courses)**
PHIL 620 Philosophy of Natural Science
PHIL 622 Philosophy of Social Science
PHIL 628 Philosophy of Logic
PHIL 630 Philosophy of Mathematics
PHIL 638 Philosophy of Language
PHIL 648 Theory of Knowledge
PHIL 650 Metaphysics
PHIL 654 Philosophy of Mind
PHIL 850 Topics in Recent Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)
PHIL 860 Topics in Philosophy of Science: ______ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or permission of instructor)
PHIL 862 Topics in Logic: ______ (Prerequisite: PHIL 610 or PHIL 628 or PHIL 630 or permission of instructor)
PHIL 866 Rational Choice Theory: ______ (Prerequisite: PHIL 628 or PHIL 630 or permission of instructor)
PHIL 870 Topics in Metaphysics: ______ (Prerequisite: PHIL 650 or permission of instructor)
PHIL 872 Topics in Theory of Knowledge: ______ (Prerequisite: PHIL 648 or permission of instructor)
PHIL 877 Topics in Philosophy of Mind: ______ (Prerequisite: PHIL 654 or permission of instructor)
PHIL 888 Topics in the Philosophy of the Social Sciences: ______ (Prerequisite: PHIL 622 or permission of instructor)

**Value Theory (two courses)**
PHIL 504 Philosophy of Sex and Love
PHIL 555 Justice and Economic Systems
PHIL 662 Aesthetics
PHIL 668 Political Philosophy
PHIL 670 Contemporary Ethical Theory
PHIL 671 Feminist Theories in Ethics
PHIL 672 History of Ethics
PHIL 674 Philosophy of Law
PHIL 676 Medical Ethics: Life and Death Issues
PHIL 677 Medical Ethics: Professional Responsibilities
PHIL 850 Topics in Recent Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)
PHIL 880 Topics in Ethics: ______ (Prerequisite: PHIL 670 or PHIL 672 or permission of instructor)
PHIL 884 Topics in Social and Political Philosophy: ______ (Prerequisite: PHIL 555 or PHIL 666 or PHIL 668 or PHIL 674 or permission of instructor)
PHIL 886 Topics in Applied Ethics: ______ (Prerequisite: PHIL 670 or PHIL 672 or 500/600-level course as specified or permission of instructor)

**Ancient Philosophy (one course)**
PHIL 508 Early Greek Philosophy
PHIL 605 The Philosophy of Plato (Prerequisite: PHIL 384)
PHIL 607 The Philosophy of Aristotle (Prerequisite: PHIL 384)
PHIL 608 Hellenistic Philosophy
PHIL 805 Plato (Prerequisite: PHIL 508 or PHIL 605 or PHIL 607 or PHIL 608 or permission of instructor)
PHIL 807 Aristotle (Prerequisite: PHIL 508 or PHIL 607 or PHIL 608 or permission of instructor)
PHIL 820 Topics in the History of Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)

**Modern Philosophy (one course)**
PHIL 820 Topics in the History of Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)
PHIL 824 Hume (Prerequisite: PHIL 648 or PHIL 650 or PHIL 654 or permission of instructor)

**Philosophy of Science (two courses)**
PHIL 622 Philosophy of Science
PHIL 630 Philosophy of Mathematics
PHIL 638 Philosophy of Language
PHIL 648 Theory of Knowledge
PHIL 650 Metaphysics
PHIL 654 Philosophy of Mind
PHIL 850 Topics in Recent Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)
PHIL 855 Davidson (Prerequisite: PHIL 638 or PHIL 654 or permission of instructor)
PHIL 857 Topics in Philosophy of Mind: ______ (Prerequisite: PHIL 654 or permission of instructor)
PHIL 860 Topics in Philosophy of Science: ______ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or permission of instructor)
PHIL 862 Topics in Logic: ______ (Prerequisite: PHIL 610 or PHIL 628 or PHIL 630 or permission of instructor)
PHIL 866 Rational Choice Theory: ______ (Prerequisite: PHIL 628 or PHIL 630 or permission of instructor)
PHIL 870 Topics in Metaphysics: ______ (Prerequisite: PHIL 650 or permission of instructor)
PHIL 872 Topics in Theory of Knowledge: ______ (Prerequisite: PHIL 648 or permission of instructor)
PHIL 877 Topics in Philosophy of Mind: ______ (Prerequisite: PHIL 654 or permission of instructor)

**Value Theory (two courses)**
PHIL 504 Philosophy of Sex and Love
PHIL 555 Justice and Economic Systems
PHIL 662 Aesthetics
PHIL 668 Political Philosophy
PHIL 670 Contemporary Ethical Theory
PHIL 671 Feminist Theories in Ethics
PHIL 672 History of Ethics
PHIL 674 Philosophy of Law
PHIL 676 Medical Ethics: Life and Death Issues
PHIL 677 Medical Ethics: Professional Responsibilities
PHIL 850 Topics in Recent Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)
PHIL 880 Topics in Ethics: ______ (Prerequisite: PHIL 670 or PHIL 672 or permission of instructor)
PHIL 884 Topics in Social and Political Philosophy: ______ (Prerequisite: PHIL 555 or PHIL 666 or PHIL 668 or PHIL 674 or permission of instructor)
PHIL 886 Topics in Applied Ethics: ______ (Prerequisite: PHIL 670 or PHIL 672 or 500/600-level course as specified or permission of instructor)

**Ancient Philosophy (one course)**
PHIL 508 Early Greek Philosophy
PHIL 605 The Philosophy of Plato (Prerequisite: PHIL 384)
PHIL 607 The Philosophy of Aristotle (Prerequisite: PHIL 384)
PHIL 608 Hellenistic Philosophy
PHIL 805 Plato (Prerequisite: PHIL 508 or PHIL 605 or PHIL 607 or PHIL 608 or permission of instructor)
PHIL 807 Aristotle (Prerequisite: PHIL 508 or PHIL 607 or PHIL 608 or permission of instructor)
PHIL 820 Topics in the History of Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)

**Modern Philosophy (one course)**
PHIL 820 Topics in the History of Philosophy: ______ (Prerequisite: 500/600-level course as specified or permission of instructor)

The Department of Philosophy and the School of Law offer a joint J.D./M.A. degree program.

The Department of Philosophy offers graduate course work in applied ethics.
students plans to investigate and what methods are to be employed. The candidate should present a preliminary list of works to be consulted and suggest, if possible, the conclusion he or she expects or hopes to establish.

**Time Limits and Other Restrictions**

Information on time limits may be found under Program Time Constraints in the General Information chapter of this catalog. The rule for transferring credit toward the M.A. appears under General Regulations in the General Information chapter.

The department’s requirement of 48 credit hours of acceptable graduate work for the Ph.D. can be reduced by petition depending on the amount and quality of equivalent graduate work completed at another institution. A student may petition the graduate faculty for a reduction (after consultation with the director of graduate studies) during the first year in the graduate program. The student must satisfy the faculty as to the quality of the petitioned course work. However, at least 24 hours of acceptable graduate work must be taken in the Department of Philosophy at KU.

### Philosophy Courses

**PHIL 500 Studies in Philosophy:** _____ (1-6).
**PHIL 504 Philosophy of Sex and Love:** (3).
**PHIL 506 Chinese Thought:** (3). NW
**PHIL 508 Early Greek Philosophy:** (3).
**PHIL 555 Justice and Economic Systems:** (3).
**PHIL 560 Nineteenth-Century Philosophy:** (3).
**PHIL 562 Kierkegaard:** (3).
**PHIL 570 Nietzsche:** (3).
**PHIL 580 Marxism:** (3).
**PHIL 582 Existentialism:** (3).
**PHIL 590 Phenomenology:** (3).
**PHIL 592 Contemporary Continental Philosophy:** (3).
**PHIL 600 Readings in Philosophy:** _____ (1-6).
**PHIL 605 The Philosophy of Plato:** (3).
**PHIL 607 The Philosophy of Aristotle:** (3).
**PHIL 608 Hellenistic Philosophy:** (3).
**PHIL 610 Symbolic Logic:** (3).
**PHIL 611 Topics in Symbolic Logic:** _____ (1-3).
**PHIL 620 Philosophy of Natural Science:** (3).
**PHIL 622 Philosophy of Social Science:** (3).
**PHIL 628 Philosophy of Logic:** (3).
**PHIL 630 Philosophy of Mathematics:** (3).
**PHIL 638 Philosophy of Language:** (3).
**PHIL 648 Theory of Knowledge:** (3).
**PHIL 650 Metaphysics:** (3).
**PHIL 654 Philosophy of Mind:** (3).
**PHIL 662 Aesthetics:** (3).
**PHIL 666 Rational Choice Theory:** (3).
**PHIL 668 Political Philosophy:** (3).
**PHIL 670 Contemporary Ethical Theory:** (3).
**PHIL 671 Feminist Theories in Ethics:** (3).
**PHIL 674 Philosophy of Law:** (3).
**PHIL 676 Medical Ethics: Life and Death Issues:** (3).
**PHIL 677 Medical Ethics: Professional Responsibilities:** (3).
**PHIL 684 Main Currents of Russian Thought I:** (3).
**PHIL 686 Main Currents of Russian Thought II:** (3).
**PHIL 800 Tutorial:** (3). Intensive supervised training in the techniques of research. Required of every graduate student seeking an advanced degree in the first or second semester of enrollment. Passing this tutorial constitutes partial fulfillment of the Ph.D. FLORS requirements. Consent of instructor required for repeating the course. Prerequisite: Graduate standing, RSH
**PHIL 805 Plato:** (3). Prerequisite: PHIL 508 or PHIL 605 or PHIL 607 or PHIL 608 or permission of instructor. LEC
**PHIL 807 Aristotle:** (3). Prerequisite: PHIL 508 or PHIL 605 or PHIL 607 or PHIL 608 or permission of instructor. LEC
**PHIL 820 Topics in the History of Philosophy:** _____ (3). This course may be offered by different instructors under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Schedule of Classes. Prerequisite: 500/600-level course as specified or permission of instructor. LEC

**PHIL 824 Humo:** (3). Prerequisite: PHIL 648 or PHIL 650 or PHIL 654 or permission of instructor. LEC
**PHIL 828 Kant:** (3). Prerequisite: PHIL 648 or PHIL 650 or PHIL 654 or permission of instructor. LEC
**PHIL 831 Hegel:** (3). Prerequisite: PHIL 560 or 500/600-level course as specified or permission of instructor. LEC
**PHIL 835 Frege:** (3). Gottlob Frege was the founder of the analytic movement in philosophy, having done seminal work in logic, the philosophy of language, and the philosophy of mathematics. This course will focus on his primary texts as well as his influence on present-day studies. Prerequisite: PHIL 628 or PHIL 630 or PHIL 638 or permission of instructor. LEC
**PHIL 843 Heidegger:** (3). Prerequisite: PHIL 560 or PHIL 562 or PHIL 570 or PHIL 582 or PHIL 590 or PHIL 592 or permission of instructor. LEC
**PHIL 848 Wittgenstein:** (3). Prerequisite: PHIL 638 or PHIL 650 or PHIL 654 or permission of instructor. LEC
**PHIL 850 Topics in Recent Philosophy:** _____ (3). This course may be offered by different instructors under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisite to be announced in Schedule of Classes. Prerequisite: 500/600-level as specified or permission of instructor. LEC
**PHIL 852 Quine:** (3). A systematic study of the major work of W. V. Quine and its influence on subsequent analytic philosophy. Topics will include Quine’s theory of meaning, philosophical logic, and philosophy of science. Prerequisite: PHIL 638 or PHIL 650 or PHIL 654 or permission of instructor. LEC
**PHIL 855 Davidson:** (3). An examination of Donald Davidson’s seminal work in philosophy of language and philosophy of mind. Among the topics to be considered will be meaning, truth, interpretation, action, and propositional attitudes. Prerequisite: PHIL 638 or PHIL 654 or permission of instructor. LEC
**PHIL 860 Topics in Philosophy of Science:** (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or permission of instructor. LEC
**PHIL 862 Topics in Logic:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 638 or PHIL 650 or PHIL 654 or permission of instructor. LEC
**PHIL 868 Topics in Philosophy of Language:** _____ (3). This course may be offered under different subtitles and may be taken more than once if the subject matter varies sufficiently. Prerequisite: PHIL 638 or permission of instructor. LEC
**PHIL 870 Topics in Metaphysics:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 650 or permission of instructor. LEC
**PHIL 872 Topics in Theory of Knowledge:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 654 or permission of instructor. LEC
**PHIL 877 Topics in Philosophy of Mind:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 654 or permission of instructor. LEC
**PHIL 880 Topics in Ethics:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 670 or PHIL 672 or permission of instructor. LEC
**PHIL 884 Topics in Social and Political Philosophy:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 655 or PHIL 666 or PHIL 668 or PHIL 674 or permission of instructor. LEC
**PHIL 886 Topics in Applied Ethics:** _____ (3). This course may be offered under different subtitles, such as professional ethics or some issue in business ethics (e.g., corporate responsibility) or in medical ethics (e.g., the definition of death); it may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisite to be announced in Schedule of Classes. Prerequisite: PHIL 670 or PHIL 672 or 500/600-level course as specified or permission of instructor. LEC
**PHIL 888 Topics in the Philosophy of the Social Sciences:** _____ (3). This course may be offered under different subtitles, such as philosophy of a particular social science (e.g., economics, psychology) or a particular issue in the social sciences (e.g., ideology, reductionism), and may be taken more than once if the subject matter varies sufficiently. Topic and instructor and specific prerequisite to be announced in the Schedule of Classes. Prerequisite: PHIL 622 or permission of instructor. LEC
**PHIL 890 Topics in Continental Philosophy:** _____ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Schedule of Classes. LEC
**PHIL 899 Master’s Thesis:** (1-6). Six hours of credit will be awarded upon completion of the master’s thesis, but no more than six hours of credit may be obtained in this course altogether. THE
**PHIL 900 Research in Philosophy:** _____ (1-3). Intensive research in philosophy. This course may be taken through individual arrangement, or in connection with small research seminars which are offered occasionally. Students may only enroll
for three hours in any given semester. May be repeated if content varies significantly. Prerequisite: Twelve hours of graduate work. BSH
PHIL 901 Ph.D. Tutorial (3). Independent research on any topic that a graduate student and a faculty member shall agree on. It shall result in a tightly focused 20-30-page paper. The student's written work will be repeatedly evaluated over the semester by the director, and the final product must be defended in an oral examination conducted by a three-member faculty committee (including the director). Prerequisite: Students must be admitted to the Ph.D. program and have successfully completed the Ph.D. core courses requirement. BSH
PHIL 999 Dissertation (1-12). This course may be taken more than once, but not for more than twelve hours of credit in any one semester. THE

Physics and Astronomy
Chair: Stephen J. Sanders
Associate Chair: Philip Baringer
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7572, www.physics.ku.edu, (785) 864-4626
Graduate Adviser: Hume Feldman, 6070A Malott Hall,
(785) 864-4740
Professors: Anthony-Twarog, Baringer, Bean, Besson, Cravens, Han, Hawley, Melott, Ralston, Sanders, Shandarin, Shi, Tvarog, Wu Professors Emeriti: Armstrong, Barse, Davidson, Davis, Eagleman, Friauf, Kwak, McKay, Munczek, Sapp, Shawl, Wiseman, Wong
Associate Professors: Feldman, Marfatia, Medvedev, Murray, Wilson
Adjunct Associate Professors: Baird, Bilen, Dreschhoff, B. Laird
Assistant Professors: Antonik, Fischer, Rudnick, Zhao
Adjunct Assistant Professors: Thomas
Another Appointment: C. Laird, Lerner, McElwee

Admission
Ordinarily, admission requires an undergraduate grade-point average of at least B (3.0 on a 4.0 scale), overall and in the major. A baccalaureate degree with a major in physics is desirable but not required. Recommended preparation consists of courses in mechanics, electromagnetic theory, thermal physics, introductory quantum mechanics, advanced laboratory, and at least one course in mathematics beyond differential equations. Working knowledge of computers and of an advanced programming language is helpful. A student with less than the recommended preparation may enroll in these courses for graduate credit.
Submit your application online at www.graduat.ku.edu.
Send all other requested application materials to
The University of Kansas
Department of Physics and Astronomy, Graduate Secretary
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7572

M.S. Degree Requirements
M.S. Degree in Physics. Candidates must complete a minimum of 30 credit hours of advanced lecture courses (numbered 500 or above) in physics and related subjects within a period of seven years. These courses must include
PHSX 711 Quantum Mechanics I
PHSX 821 Classical Mechanics
PHSX 831 Electrodynamics I and at least two of the following:
PHSX 721 Chaotic Dynamics
PHSX 741 Nuclear Physics I

PHSX 761 Elementary Particles I
PHSX 781 Solid State Physics I
PHSX 793 Physical Cosmology
PHSX 795 Space Plasma Physics
PHSX 815 Computational Methods in Physical Sciences

A minimum of 2 hours in PHSX 899 Master’s Research/Thesis is required, with a maximum of 6 hours that count toward the master’s degree. A candidate who has not had an advanced undergraduate laboratory course (junior/senior level) must take one of the three advanced laboratory courses offered in the department.

Undergraduate Certification: Certification of knowledge of undergraduate physics normally must be completed within 12 months of entering the M.S. program, in addition to the required course work. Extension is possible with recommendation of the graduate admission committee. Certification can be achieved in several ways: (1) a scaled Graduate Record Examination physics score greater than or equal to 600; or (2) determination by the graduate director and graduate adviser, based on the diagnostic examination given on entering the program combined with the student’s undergraduate record, that the student understands all major elements of undergraduate physics; or (3) successful completion with grade of B or higher of all undergraduate courses that the graduate director or adviser recommends based on the results of (2). A student who has not succeeded in certifying undergraduate physics knowledge could, within 12 months of starting the program, petition the graduate committee for an oral examination on undergraduate physics. The oral examination is administered by a committee of six faculty members assigned by the department.

Communication Skills: All graduate students must deliver at least one oral presentation per semester, with at least two faculty members or their professional equivalents present.
Candidates must pass a general oral examination in physics. The examination is given shortly before completion of other work for the degree. A master's thesis is not required but may be submitted if the candidate and the director of the candidate's research believe it to be appropriate.

M.S. Subspeciality in Computational Physics and Astronomy. A total of 30 hours of graduate credit is required. The 33 hours listed below under parts A and B may include certain undergraduate-level electrical engineering and computer science courses. Students entering the program may have satisfied several of these requirements. A total of 30 hours of graduate credit is still required. No more than the required 6 hours of PHSX 899 Master’s Research/Thesis may be counted toward the degree.

A. Required Courses (21 credit hours)
PHSX 815 Computational Methods in Physical Sciences
PHSX 718 Mathematical Methods in Physical Sciences
MATH 781/EECS 781 Numerical Analysis I
EECS (one course at the 300 level or above in addition to EECS 781)
Note: Courses below the 500 level do not count toward the required 30 hours of graduate credit.
One additional PHSX/ASTR/ATMO course at the 500 level or above ........... 3
PHSX 899 Master’s Research/Thesis .................................................. 6

B. Twelve or more credit hours from the following list: ............ 12
Note: A course used to fulfill a requirement under A (e.g., EECS 448) may not also be counted under B.
EECS 462 Digital Systems Analysis (3)
EECS 460 Functional Programming (3)
EECS 485 Computer Systems and Assembly Language (4)

Faculty and students in nuclear physics are studying the collisions of relativistic heavy-ions in data obtained from the RHIC collider facility, using detectors designed and constructed on campus.

KU particle physicists are looking for new phenomena at the world's highest energy accelerators: Fermilab's currently operating proton-antiproton collider, CERN's soon-to-be-completed Large Hadron Collider, and the proposed next-generation electron-positron linear collider.
Physics & Astronomy

*EECS 448 Software Engineering I (3)
*Courses below the 500 level do not count toward the required 30 hours of graduate credit.
EECS 501 Data Structures (4)
EECS 672 Introduction to Computer Graphics (3)
EECS 848 Software Engineering II (3)
MATH 598, MATH 696, or MATH 796 Special Topics: (3)
MATH 611 Time Series Analysis (3)
MATH 627 Probability (3)
MATH 647 Applied Partial Differential Equations (3)
MATH 782/EECS 782 Numerical Analysis II (3)
MATH 785 Applied Numerical Methods for Partial Differential Equations (3)
PHSX/ASTR/ATMO courses numbered 500 or above (3)

C. Thesis. An important component of this degree is the completion and documentation of a successful computer project. A thesis must be presented that describes the basic physics involved in the project, the method of implementing the project, and a discussion of the results. An oral defense of the thesis is required before a committee of at least three members of the Graduate Faculty.

M.S. Emphasis in Geophysics. This program is for students who wish to emphasize geophysics in terms of either solid earth or fluids. Students should have a degree in physics or another physical science or engineering, with a strong physics and mathematics background. Candidates must complete a minimum of 30 credit hours of advanced lecture courses, numbered 500 or above, in physics and related subjects. These must include the following:

Four courses chosen from the following: .......................................................... 12
GEOL 311 Mineralogy (3) (may not be taken for graduate credit)
GEOL 512 Igneous and Metamorphic Petrology (3)
GEOL 552 Introduction to Hydrogeology (3)
GEOL 562 Structural Geology (4)
GEOL 577 Environmental Geophysics (3)
PHSX 528/GEOL 573 Geodynamics and Plate Tectonics (3)
ATMO 650 Advanced Synoptic Meteorology (3)
PHSX 795 Space Plasma Physics (3)
ATMO 642 Remote Sensing (3)
ATMO 650 Advanced Synoptic Meteorology (3)

Each of the following courses:
GEOL 572 Geophysics .......................................................... 3
PHSX 623 Physics of Fluids ...................................................... 3
PHSX 899 Master’s Research/Thesis ........................................... 2-6
Electives (minimum of 10 hours at the 700 level or above that must include at least one of the following): .................................................. 10
PHSX 815 Computational Methods in Physical Sciences (3)
PHSX 732/GEOL 772 Geophysical Data Analysis (3)
PHSX 723/GEOL 773 Seismology (3)
PHSX 724 Potential Fields in Geophysics (3)
PHSX 727/GEOL 771 Advanced Geophysics: ___ (3)

The student must write a research/thesis proposal and orally defend it before a committee of three faculty members, at least one of whom is from a department other than physics and astronomy. The student also must orally defend the completed master’s research/thesis project before this committee.

Ph.D. Degree Requirements

Residence. The student must spend the equivalent of three full academic years in graduate study at this or another approved institution or laboratory. Graduate students with half-time assistantships usually require at least four years to complete all requirements. Maximum enrollment for students with no other departmental obligations is 16 hours a semester. In addition to satisfying the residence requirement, a student with a half-time assistantship must be enrolled for at least 6 hours each semester. A maximum of 12 hours is permitted if the student’s duties consist of research that partially fulfills degree requirements. A fellowship holder or full-time student with private support must be enrolled for at least 9 hours.

To be eligible for teaching assistantships, all graduate students who are not native speakers of English must achieve a minimum score of 50 on the SPEAK test. International students must pass an oral examination to demonstrate English fluency. Students who fail this examination should take courses from the Applied English Center.

Time Limits. Students entering with bachelor’s degrees have a maximum time limit of eight years to complete the Ph.D. Students entering with master’s degrees have a six-year limit. It is not necessary to obtain a master’s degree to begin study for a Ph.D.

Preliminary Candidacy. To be admitted to preliminary candidacy, each graduate student must satisfy department requirements:

1. Undergraduate knowledge of physics must be certified by the department at the advanced undergraduate level (600-level KU courses). This normally must be completed within 12 months of entering the program, in addition to required course work. Extension is possible with recommendation of the graduate admission committee. Certification can be achieved in several ways: (1) a scaled GRE physics score greater than or equal to 600; or (2) determination by the graduate director and graduate adviser, based on the diagnostic examination given on entering the program combined with the student’s undergraduate record, that the student understands all major elements of undergraduate physics; or (3) successful completion with grade of B or better of all undergraduate courses that the graduate director or adviser recommends based on the results of (2). A student who has not succeeded in certifying undergraduate physics knowledge could, within 12 months of starting the program, petition the graduate committee for an oral examination on undergraduate physics. The oral examination is administered by a committee of six faculty members assigned by the department.

2. A minimum grade-point average of 3.2 must be achieved in core courses. It is computed from the following five equally weighted elements:

- Grade obtained in PHSX 711 Quantum Mechanics I
- Grade obtained in PHSX 811 Quantum Mechanics II
- Grade obtained in PHSX 821 Classical Mechanics
- Grade obtained in PHSX 851 Electrodynamics I
- Average grade of two other PHSX lecture courses numbered 700 or higher

Students entering with graduate credit from other institutions may petition the departmental committee on graduate studies to use the credits to meet KU requirements. For the core grade-point average, grades of B or higher from other institutions may be used for at most three of the four specified courses. For the remaining course, the student must obtain written certification of a B or higher from the KU instructor. Certification may be obtained by taking the course, taking the final examination (if any), or other means determined by the instructor. An appropriate higher-level course also may be used for certification in a core course. The two other PHSX lecture courses numbered 700 or higher must be taken at KU. Graduate students normally should complete all core courses by the end of the second year.

On admission to preliminary candidacy, the student selects a research adviser who appoints a tentative dissertation committee with the adviser as chair and at least two other members of the

Theoretical physicists at KU are actively investigating the structure of the proton, the large-scale structure of the universe, and the connection between quantum gravity and the highest energy cosmic rays.

Condensed-matter physicists at KU are exploring quantum devices that could be used as qubits in quantum computers, machines that could be orders of magnitude faster than current computers.
department’s Graduate Faculty. This committee serves until the student passes the comprehensive oral examination and the dissertation committee is appointed. The computing skill requirement should be met within one year (by taking PHSX 815), and the comprehensive oral examination should be scheduled within two years after the student attains preliminary candidacy.

**Course Requirements.** A total of 11 advanced lecture courses (33 hours) is required. In addition, 1 hour of PHSX 700 Colloquium is required.

1. Core courses:  
   - PHSX 711 Quantum Mechanics I  
   - PHSX 811 Quantum Mechanics II  
   - PHSX 821 Classical Mechanics  
   - PHSX 831 Electrodynamics I  

2. Other required courses:  
   - PHSX 700 Colloquium  
   - PHSX 718 Mathematical Methods in Physical Sciences  
   - PHSX 815 Computational Methods in Physical Sciences (satisfies FLORS requirement)  
   - PHSX 871 Statistical Physics I  
   - PHSX 931 Electrodynamics II  

3. Two additional PHSX lecture courses numbered 700 or above. The courses must be in different subfields of physics. They may not be used simultaneously to satisfy other degree requirements.  

4. One additional advanced PHSX lecture course numbered 800 or above.  

5. A Ph.D. student who has not had the equivalent of 6 credit hours of advanced undergraduate laboratory course work (junior/senior level) must take an advanced laboratory course. Other experimental work (e.g., senior thesis or undergraduate research) may be considered for this requirement. The student and the adviser select subsequent work, consisting of advanced courses in appropriate fields and seminars, based on the student’s need and intended specialization. There is no prescribed total number of credit hours. The student’s dissertation committee determines the adequacy of courses and seminars and specifies total course requirements.

**Colloquium and Graduate Seminar.** All students must enroll in PHSX 700 Colloquium in the sixth semester. Students should have attended at least 75 percent of the regularly scheduled colloquia during the six semesters to achieve a passing grade. One semester of the first year, students are expected to attend the graduate seminar to become familiar with research programs and to gain experience in oral presentations.

**Computing Skill.** Students must complete PHSX 815 Computational Methods in Physical Sciences/ASTR 815 Computational Physics and Astronomy with a grade of A or B, preferably within one year after admission to preliminary candidacy. This course has significant prerequisites in advanced undergraduate computer science and requires completion of a substantial computer program to solve a physical problem.

**Comprehensive Examination.** After completing a major portion of the required course work and satisfying the computing skill requirement, the student must pass the comprehensive examination. The department recommends five members for the examining committee to Graduate Studies. One member must be from outside the department. Requests to take the examination must be made at least three weeks before the examination. The student writes a 2,000- to 4,000-word paper relevant to thesis work. The paper must be presented at least one week before the scheduled oral examination. The student is examined on the oral presentation, the contents of the paper, the bibliography, the general field of physics, and other related material. The student must receive passing grades on both the written and oral examinations.

**Research and Post-Comprehensive Enrollment.** Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the Ph.D. Graduate Studies designates the candidate’s dissertation committee, based on department recommendations. The committee establishes course requirements and directs the research project. The candidate must remain continuously enrolled, full time including summer sessions, until all requirements are met. The number of hours is determined by the committee and should accurately reflect the candidate’s demands on faculty time and university resources.

**Final Oral Examination.** At least five months must elapse between the comprehensive oral examination and the final oral examination. When the dissertation has been tentatively accepted, the committee chair requests the final oral examination to be scheduled. This request must be made two weeks before the examination. The dissertation committee recommends at least five members, one of whom must be from outside the department. The candidate must defend his or her dissertation in an open meeting. Rules for preparing the final copies of the dissertation are available online at www.graduatedku.edu.

**Engineering Physics**

Chair: Stephen Sanders, 1082 Malott Hall, (785) 864-4626

No graduate program in engineering physics is offered. Courses at the 500 and 600 levels carry graduate credit. EPHX courses are listed in the School of Engineering chapter of this catalog.

### Astronomy Courses

- ASTR 503 Undergraduate Research (1-4).
- ASTR 591 Stellar Astronomy (3).
- ASTR 592 Galactic and Extragalactic Astronomy (3).
- ASTR 596 Observational Astrophysics (1).
- ASTR 597 Analysis in Astrophysics (1-3).
- ASTR 691 Astrophysics I (3).
- ASTR 692 Astrophysics II (3).
- ASTR 791 Seminar in Astrophysics (1-3). Seminar designed to cover current topics in the physics of the Universe beyond the solar system. Content will vary. Graduate students engaged in or preparing for research may repeat enrollments in this course. Open to undergraduates with twelve hours of physics/astronomy courses numbered 500 or above, or consent of instructor. LEC
- ASTR 795 Space Plasma Physics (3). The physics of fully ionized gases in magnetic fields and their application to interplanetary processes, planetary radiation belts, and the surface of the sun. The motion of charged particles in magnetic fields, magnetohydrodynamic waves, the solar wind and the magnetosphere. (Same as PHSX 795.) Prerequisite: PHSX 621. Corequisite: PHSX 631. LEC
- ASTR 815 Computational Physics and Astronomy (3). Advanced computer applications in physics and astronomy. General discussion and illustration of problem organization and solution by numerical and other methods with examples from plasma, space, solid state, elementary particle, and nuclear physics and astronomy. Students will design, write, validate, and document a computer program to solve a physical problem. (Same as PHSX 815 and CHEM 914.) Prerequisite: Six hours of computer science courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC
- ASTR 897 Seminar in Plasma and Space Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. (Same as PHSX 897.) LEC

### Physics Courses

- PHSX 500 Special Problems (1-5).
- PHSX 501 Honors Research (1-4).
- PHSX 502 Seminar in Physics and Astronomy Instruction (1-3).
- PHSX 503 Undergraduate Research (1-4).
- PHSX 511 Introductory Quantum Mechanics (3).
- PHSX 516 Physical Measurements (4).
- PHSX 518 Mathematical Physics (3).
- PHSX 521 Mechanics I (3).
- PHSX 528 Geodynamics and Plate Tectonics (3).
- PHSX 531 Electricity and Magnetism (3).
- PHSX 536 Electronic Circuit Measurement and Design (4).
- PHSX 557 Topics in Mechanics, Properties of Materials, Thermodynamics (1-3).
- PHSX 558 Topics in Electricity and Magnetism and Optics (1-3).
- PHSX 559 Topics in Modern Physics (1-3).
- PHSX 594 Cosmology and Culture (1).
- PHSX 600 Special Topics in Physics and Astrophysics: ____ (1-3).
- PHSX 615 Numerical and Computational Methods in Physics (3).
PHSX 621 Mechanics II (3).
PHSX 623 Physics of Fluids (3).
PHSX 631 Electromagnetic Theory (3).
PHSX 641 Introduction to Nuclear Physics (3).
PHSX 655 Optics (3).
PHSX 661 Introduction to Elementary Particle Physics (3).
PHSX 671 Thermal Physics (3).
PHSX 681 Concepts in Solids (3).
PHSX 691 Astrophysics I (3).
PHSX 693 Gravitation and Cosmology (3).
PHSX 700 Colloquium (1). Topics of current interest in physics, astronomy, and atmospheric science. Repeat enrollments are permitted. LEC.
PHSX 701 Major Experiments and Observations in Classical and Contemporary Physics (1-3). Critique, discussions, and interpretation of the most important discoveries and observations in physics. LEC.
PHSX 711 Quantum Mechanics I (3). Linear vector spaces. Postulates of quantum mechanics. Schrödinger equation. Harmonic oscillator and other problems in one dimension. Central forces and angular momentum. Symmetries and conservation laws. The hydrogen atom. Spin. Spin and statistics. Addition of angular momenta. Time independence. Quantum-mechanical systems, attractors, sensitive dependence on initial conditions, chaos, one-dimensional maps, strange attractors, fractal basin boundaries, renormalization group analysis, intermittency, crisis and chaotic transients. Prerequisite: Mechanics (PHSX 521, or its equivalent), ordinary differential equations (MATH 320), or its equivalent, and some computer programming knowledge. LEC.
PHSX 722 Geophysical Data Analysis (3). Fourier analysis, sampling theory, prediction and interpolation of geophysical data, filtering theory, correlation techniques, deconvolution. Examples will be chosen from various fields of geophysics. (Same as CHEM 718.) Prerequisite: Two semesters of junior-senior mathematics. LEC.
PHSX 723 Seismology (3). General theory of seismic waves, wave field extrapola-
tion (migration) by finite difference methods, construction of travel-time curves, reflection and attenuation coefficients, earthquake source mechanism, distribution and forecasting of earthquakes. (Same as GEO 773.) Prerequisite: MATH 250/250-AE 250/ARCE 250/CE 250/CPPE 250/ECECS 250/EPHX 250/ME 250 and either GEOL 572 or GEOL 573 or PHSX 528. LEC.
PHSX 727 Advanced Geophysics: (1-3). Topics to vary with demand and include heat flow, wave propagation, synthetic seismograms, groundwater exploration, geothermal exploration, electrical methods in exploration, rock mechanics-tectonophysics, rock magnetism, geomagnetism, paleomagnetism, geophysical inverse theory, and others upon sufficient demand. May be repeated for different topics. (Same as GEO 771.) Prerequisite: GEOL 572 or GEOL 573/PHSX 528 or consent of instructor. LEC.
PHSX 731 Molecular Biophysics (3). Methods and concepts in contemporary molecular biophysics are discussed. Particular emphasis is placed on the thermodynamics of macromolecular interactions and quantitative methods of data analysis. Basic enzymology and biological spectroscopy will also be reviewed. Prerequisite: PHSX 212, MATH 122, and CHEM 188. LEC.
PHSX 741 Nuclear Physics I (3). Experimental methods in nuclear physics, elementary concepts and simple considerations about nuclear structure and reaction systems. Prerequisite: PHYS 611. LEC.
PHSX 761 Elementary Particles I (3). Particle accelerators and detectors; quarks and leptons; invariance principles and conservation laws; strong, electromagnetic, and weak interactions of elementary particles; unification of electroweak and other interactions. Prerequisite: PHSX 711 and MATH 320. LEC.
PHSX 781 Solid State Physics I (3). Classification of solids, structure and symmetry of crystals; lattice vibrations and thermal properties of solids; electric and magnetic properties; electron theory of metals and semiconductors; atomic and electronic transport processes; theory of ionic crystals. Prerequisite: PHSX 611 (or CHEM 648) and PHSX 671 (or CHEM 664). LEC.
PHSX 791 Seminar in Astrophysics (1-3). Seminar designed to cover current topics in the physics of the Universe beyond the solar system. Content will vary. Graduate students engaged in or preparing for research may repeat enrollments in this course. Open to undergraduates with twelve hours of physics/astronomy courses numbered 500 or above, or consent of instructor. LEC.
PHSX 793 Physical Cosmology (3). Discussion of how fundamental laws of physics govern the evolution of the universe as a whole along with its structure. Survey of cosmological puzzles in the observable universe, including observed structures, cosmic background radiation and evidence for dark matter. Development of the universe, including theories of initial conditions; cosmological phase transitions; generation of observable relics and dark matter; symmetry breaking; baryogenesis; inflation; recombination, gravitational instability and the formation of structure; current experimental techniques. Prerequisite: PHSX 718. Recommended: PHSX 593. LEC.
PHSX 795 Space Plasma Physics (3). The physics of fully ionized gases in magnetic fields and their application to interplanetary processes, planetary radiation belts, and the sun. The motion of charged particles in magnetic fields, magnetohydrodynamic waves, the solar wind, the ionosphere, and the magnetosphere. (Same as ASTR 795.) Prerequisite: PHSX 621. Corequisite: PHSX 651. LEC.
PHSX 800 Graduate Problems (1-5). Advanced laboratory projects, computer research problems, or library reading projects. Repeated enrollments are permitted. LEC.
PHSX 801 Advanced Topics (1-3). Lectures on advanced material not covered by regular courses. The topics are not limited but generally address recent experimental or theoretical developments in subjects such as superconductivity, nuclear physics, elementary particle physics, quantum field theory, gauge and unified theories, nonlinear or chaotic systems, space plasma physics, and astrophysics and cosmology. Repeated enrollments are permitted. LEC.
PHSX 811 Quantum Mechanics II (3). Time dependent perturbation theory. Gauge invariance and electromagnetic interactions. Quantization of the electromagnetic field and applications. The Dirac equation, its transformation properties and applications to relativistic problems. Scattering theory, elementary applications, and formal properties. Prerequisite: PHSX 711. LEC.
PHSX 815 Computational Methods in Physical Sciences (3). Advanced computer applications in physical science. General discussion and illustration of program organization and solution by numerical and other methods with examples from physics, astronomy, and other physical sciences. Students will design, write, validate, and document a computer program to solve a physical problem. (Same as ASTR 815 and CHEM 914.) Prerequisite: Six hours of computer science courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC.
PHSX 817 Graduate Seminar (1). First year graduate students meet to survey research opportunities in the department and develop skills in giving oral presentations in physics and related areas. Prerequisite: Only one hour of PHSX 717 can count toward required hours for degree. LEC.
PHSX 821 Classical Mechanics (3). Vector and tensor notation; review of Newtonian mechanics; Lagrange vector notation; and some computer programming knowledge. LEC.
PHSX 841 Nuclear Physics II (3). Nuclear forces and the two-body problem; nuclear models; phenomenological treatment of nuclear reactions and decay processes. Prerequisite: PHSX 741 and PHSX 811. LEC.
PHSX 861 Elementary Particles II (3). Theoretical analysis of the standard model of strong and electroweak interactions. Applications to decay and scattering processes with comparison to experiments. Selected topics in non-perturbative physics. Examples of tests to probe beyond the standard model. Prerequisite: PHSX 761. Corequisite: PHSX 911. LEC.
PHSX 871 Statistical Physics I (3). Review of and advanced topics in thermodynamics; the Maxwell relations; the third law; phase transitions. Kinetic theory: the Boltzmann equation; transport phenomena. Statistical mechanics: ideal Maxwell-Boltzmann, Fermi-Dirac and Bose-Einstein gases; ensemble theory; derivation of the laws of thermodynamics. Prerequisite: PHSX 718. LEC.
PHSX 881 Solid State Physics II (3). More advanced topics in solid state physics that may include: diamagnetism, paramagnetism, ferromagnetism, and antiferromagnetism; electron and nuclear spin magnetic resonance; dielectric properties.

The space physics group has experiments on the Cassini mission to Saturn and Titan, models planetary magnetospheres and their interaction with space plasmas, and explores the physics of gamma ray bursts.

Fifteen KU students have received Truman Scholarships, for outstanding potential for leadership in government, since the award was established in 1976.
and ferroelectricity, photocatalytic activity and luminescence. Prerequisite: PHSX 631 and PHSX 711 (or CHEM 913). LEC

PHSX 895 Plasma Physics (3). Magnetohydrodynamics, including discussion of shocks, waves, and stability theory; statistical mechanical foundations; kinetic theory; microinstability; non-linear phenomena. Prerequisite: PHSX 795. LEC

PHSX 897 Seminar In Plasma and Space Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. (Same as ASTR 897.) LEC

PHSX 899 Master’s Research/Thesis (1-10). Research work (either experimental or theoretical) in physics for students working toward the master’s degree. Repeat enrollments are permitted. THE

PHSX 911 Quantum Mechanics III (3). Path integral formulation of quantum mechanics. Introduction to quantum field theory using the canonical approach and using the path integral approach. Application of perturbation theory in quantum electrodynamics. Selected applications in condensed matter, nuclear, and particle physics. Prerequisite: PHSX 811. LEC


PHSX 915 Relativity (3). Reviews of special relativity, manifolds, tensors, and geometry. General coordinate covariance and general relativity. Applications to classical theory of gravitation: weak field tests, isotropic, homogeneous cosmology, Schwarzschild solution. Selected advanced topics. Prerequisite: A total of 10 hours of junior or senior work in physics and mathematics, including at least concurrent enrollment in MATH 646. LEC

PHSX 917 Seminar in Theoretical Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. Content will vary. LEC

PHSX 921 Electrodynamics II (3). Inhomogeneous Maxwell’s equations and multipole radiation fields; special theory of relativity; radiation from accelerated charges: scattering and dispersion. Prerequisite: PHSX 831. LEC

PHSX 947 Seminar in Nuclear Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. LEC

PHSX 967 Seminar in Particle Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. LEC

PHSX 971 Advanced Statistical Mechanics (3). Advanced equilibrium statistical mechanics and introduction to nonequilibrium statistical mechanics. Topics include: the theory of liquids, critical phenomena, linear response theory and time correlation functions, Langevin dynamics, and molecular hydrodynamics. (Same as CHEM 917.) Prerequisite: PHSX 871 or CHEM 917. LEC

PHSX 979 Seminar in Solid State Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. LEC

PHSX 997 Seminar in Particle Physics (1-10). Research work (either experimental or theoretical) in physics for students working toward the Ph.D. degree. Repeated enrollments are permitted. THE

Physiology and Cell Biology
See Biological Sciences: Molecular Biosciences.

Polish
See Slavic Languages and Literatures.

Political Science
Chair: Elaine Sharp, esharp@ku.edu
Blake Hall, 1541 Lilac Lane, Room 521
Lawrence, KS 66045-3129, www2.ku.edu/~kups, (785) 864-9025
Graduate Studies Director: Juliet Kaarbo, kaarbo@ku.edu, 520 Blake Hall, (785) 864-9043

Professors: Cigler, Francisco, Haider-Markel, Heilke, Johnson, Loomis, Rohrschneider, Schrodt, Schumaker, Sharp

Professors Emeriti: Drury, Heller, Nehring, Piekalkiewicz, Tomasek

Associate Professors: Britton, Daley, Herron, Joslyn, Kaarbo, Kennedy, O’Brien, Reich, Yap

Assistant Professors: Berjarano, Doan, Lynch, Omelicheva, Steele

The department offers M.A. and Ph.D. degrees for students interested in academic work in political science leading to teaching and research careers. Political science graduates also have found careers in the public, private, and not-for-profit sectors. Ph.D. students can pursue concentrations in U.S. politics, comparative politics, international relations, political theory, and public policy.

Admission
Admission to M.A. or Ph.D. programs is based on the applicant’s undergraduate and/or graduate record, standardized test scores, and references from instructors. All applicants must complete a bachelor’s degree. A completed application must include (1) application, (2) Graduate Record Examination results—verbal, quantitative, and analytical, (3) a one- to two-page statement of goals and research interests, (4) three letters of recommendation, preferably from faculty members, (5) a nonrefundable application fee (see Admission in the General Information chapter of this catalog), and (6) one official transcript from each college or university attended. An official transcript is sent directly from the registrar of the student’s school to the department. All these materials must be received before the application can be considered.

If the applicant wishes to be considered for regular fall admission and for a graduate teaching assistantship, the application file must be complete by January 10 for the coming academic year. A student who wishes to be considered for fall admission but not for a teaching assistantship should submit the application by April 15 but may do so earlier.

Send all other requested application materials to
The University of Kansas
Department of Political Science, Graduate Coordinator
Blake Hall, 1541 Lilac Lane, Room 504
Lawrence, KS 66045-3129

Fields of Graduate Study
For graduate study, courses in the department are divided into the following fields:
- Political philosophy and empirical theory
- U.S. political institutions and processes
- Comparative politics
- International relations
- Public policy

M.A. Degree Requirements
All candidates for the M.A. degree must complete, at a satisfactory level, (1) 30 semester hours of graduate credit, 21 of which must be earned in courses at the 700 level or above; (2) research methods through POLS 706; and (3) a comprehensive master’s oral examination. The student selects a principal adviser from the Graduate Faculty by the end of the first year to choose courses and prepare for the comprehensive examination. The examination is administered by a three-person M.A. committee that includes the student’s principal adviser and two other members of the KU Graduate Faculty selected by the student in consultation with the principal adviser. One member of the committee may be from another department (including Ad Hoc and Special members of the Graduate Faculty). Directed readings courses in excess of 5 hours cannot be counted toward the 30 hours required for the degree.

With prior written approval, candidates may count up to 6 graduate credit hours in political science may be admitted with the provision that they complete additional hours of course work.

All candidates must fulfill the requirements of either the thesis or the nonthesis option for the Master of Arts degree.

Thesis Option. Upon completion and certification of an acceptable thesis, candidates may count 6 credit hours of thesis enrollment toward the 30 credit hours required for the M.A. degree.

Nonthesis Option. Candidates may substitute a minimum of two 800- or 900-level research courses plus satisfactory performance
on a comprehensive written examination administered by the three-person M.A. committee before the oral examination.

**Ph.D. Degree Requirements**

Students who complete the Master of Arts degree may be eligible to pursue the Ph.D. degree.

The Ph.D. program requires work in two major subfields and one minor subfield.

The major fields must be drawn from those offered by the division (see above). Before their first attempt at the written preliminary examination in any subfield, all Ph.D. students must complete at least four courses in that field, three of which are at the 700 level or above. Enrollment in directed research covering a particular subfield may be substituted for one of the four courses/seminars.

The minor field may be another of the subfields, a related field from an outside department, or an interdisciplinary program. If the choice is not one of the subfields, the student must obtain written approval of the adviser and the graduate studies director. The courses for the minor field must follow the same structure as outlined above for the major fields. Courses for the minor field may not be applied to another examination field.

Students should consult their major advisers to plan a schedule of course work and seminar preparation in each of these subfields to provide adequate preparation for the written preliminary examination. The student must complete the Foreign Language or Other Research Skills (FLORS) requirement and Ph.D. residence requirement before registering for the preliminary examination. All in-completes in Ph.D. course work must be completed or a waiver must be granted by the graduate studies director.

In addition to the course work requirements and residence, the Ph.D. aspirant must fulfill the FLORS requirement. There are two options for Ph.D. aspirants:

**Option 1: Research Methods.** POLS 706 and POLS 707 plus one research methods course approved by the major adviser and the graduate director.

**Option 2: Research Methods and Foreign Language.** POLS 706 and POLS 707 plus one of the following choices in a language approved by the student’s adviser as well as the graduate director: (1) two semesters of a single foreign language, (2) demonstrated reading knowledge of a foreign language, or (3) native ability. All work must be no more than five years old at the time of certification.

To become a Ph.D. candidate, the student must satisfactorily complete a comprehensive oral examination. No student may attempt the comprehensive oral examination until the two written preliminary examinations have been passed and the requirements of the minor subfield have been completed.

After passing the comprehensive oral examination, the doctoral candidate must write a dissertation approved by a departmental dissertation committee and pass a final oral defense of the dissertation to qualify for the Ph.D. degree.

### Political Science Courses

- **POLS 501 Contemporary Political Thought** (3).
- **POLS 502 History of Political Thought** (3).
- **POLS 503 Politics in Literature** (3).
- **POLS 504 Millenarian Movements** (3).
- **POLS 505 Citizens, States, and Civility** (3).
- **POLS 506 Honors Seminar in Political Research** (3).
- **POLS 511 The Judicial Process** (3).
- **POLS 512 Latino Politics** (3).
- **POLS 513 Power in American Communities** (3).
- **POLS 515 American Political Parties** (3).
- **POLS 516 Public Opinion and American Democracy** (3).
- **POLS 520 Political Communication** (3).
- **POLS 521 Rhetoric, Politics, and the Mass Media** (3).
- **POLS 528 Environmental Justice and Public Policy** (3).
- **POLS 553 Comparative Environmental Politics** (3).
- **POLS 561 Liberation in Southern Africa** (3). NW
- **POLS 562 Women and Politics** (3).
- **POLS 563 Comparative Political Economy** (3).
- **POLS 564 Elections and Political Parties Around the World** (3).
- **POLS 565 Political Change in Asia** (3).
- **POLS 600 Contemporary Feminist Political Theory** (3).
- **POLS 601 Political Ideologies** (3).
- **POLS 602 American Political Ideas** (3).
- **POLS 603 Democratic Theory** (3).
- **POLS 604 Religion and Political Theory** (3).
- **POLS 605 A Study of Political Thought in Antiquity** (3).
- **POLS 607 Modern Political Theory** (3).
- **POLS 608 Social Choice and Game Theory** (3).
- **POLS 609 Topics in Political Theory:** (3).
- **POLS 610 Constitutional Law: Governmental Powers** (3).
- **POLS 611 Constitutional Law: Civil Liberties** (3).
- **POLS 612 Psychology in Politics** (3).
- **POLS 613 Comparative U.S. State Politics** (3).
- **POLS 614 Urban Politics** (3).
- **POLS 615 Campaigns and Elections** (3).
- **POLS 616 Interest Group Politics** (3).
- **POLS 617 The Congress** (3).
- **POLS 618 The Presidency** (3).
- **POLS 619 Topics in American Politics:** (1-3).
- **POLS 620 Formulation of Public Policy** (3).
- **POLS 621 Public Policy Analysis** (3).
- **POLS 622 Government and the Economy** (3).
- **POLS 623 The Politics of Social Policy** (3).
- **POLS 624 Environmental Politics and Policy** (3).
- **POLS 625 Extremist Groups and Government Response** (3).
- **POLS 626 Introduction to Survey Research** (3).
- **POLS 627 Advanced Issues in Survey Research** (3).
- **POLS 629 Topics in Public Policy:** (1-3).
- **POLS 634 Bureaucratic Politics** (3).
- **POLS 640 Politics of Reproductive Policy** (3).
- **POLS 645 Corruption, Crisis, and Scandal** (3).
- **POLS 650 Palestinians and Israelis** (3).
- **POLS 651 Women and Politics in Latin America** (3).
- **POLS 652 Politics in Western Europe** (3).
- **POLS 653 Gender, War, and Peace** (3).
- **POLS 654 Politics and Government of Russia and the Central Eurasian States** (3).
- **POLS 655 Politics of East-Central Europe** (3).
- **POLS 656 Governments and Politics of East Asia** (3). NW
- **POLS 657 Government and Politics of Southeast Asia** (3). NW
- **POLS 658 Theories of Politics in Latin America** (3).
- **POLS 659 Political Dynamics of Latin America** (3).
- **POLS 660 The Politics and Problems of Developing Countries** (3). NW
- **POLS 661 Politics of the Middle East** (3). NW
- **POLS 663 Protest and Revolution** (3).
- **POLS 664 Middle East Politics, Honors** (3). NW
- **POLS 665 Politics in Africa** (3). NW
- **POLS 666 Political Economy of East Asia** (3).
- **POLS 667 Islam and Politics** (3). NW
- **POLS 668 Reform in Contemporary China** (3). NW

Political science doctoral graduates have found teaching and professional careers at Oklahoma State University, the University of California–Irvine, the University of Melbourne–Australia, SUNY-Baruch College, National Defense College, and Cleveland State University.

KU’s political science program ranked 29th in the nation among public universities in the 2009 edition of U.S. News & World Report’s “America’s Best Graduate Schools.”
POLS 699 Topics in Comparative Politics: (2-3). 
POLS 671 United States Foreign Policy (3).
POLS 672 International Cooperation (3).
POLS 672 International Political Economy (3).
POLS 673 International Organization (3).
POLS 674 International Ethics (3).
POLS 675 Russian Foreign Policy (3).
POLS 676 International Relations of Asia (3).
POLS 677 U.S. National Security Policy (3).
POLS 678 Chinese Foreign Policy (3).
POLS 679 International Conflict (3).
POLS 680 International Relations in Political Philosophy (3).
POLS 681 Comparative Foreign Policy (3).
POLS 682 U.S. Political Post-Colonialism (3).
POLS 683 International Mediation, Honors (3).
POLS 684 International Law: The State and the Individual (3).
POLS 685 International Law: Laws of Armed Conflicts (3).
POLS 689 Topics in International Relations: (2-3).
POLS 701 Political Theory (3). This course is intended to introduce graduate and advanced undergraduate students to the kinds of activities engaged in by political theorists. Thus the course focuses on several approaches to doing political theory, such as interpreting the work of great political philosophers, clarifying political concepts, organizing and integrating political ideas, evaluating political practices, and creating new political perspectives. The course focuses on historical and contemporary treatments of both epistemological issues (the possibility and grounds for political knowledge) and selected substantive issues (e.g., the legitimacy of the state, the merits and limitations of democracy, the requirements of justice, and the nature and importance of ideologies). LEC 
POLS 703 Social Choice and Game Theory (3). A survey of the political economic approach to the individual and collective choice. The course focuses on models of voting systems and other political institutions as seen from a game theoretic perspective. Prerequisite: Nine hours of political science or consent of instructor. LEC 
POLS 705 Research Design for Political Science (3). Introduction to the discipline of political science, the philosophy of science, research design, and data acquisition. Prerequisite: Graduate standing or consent of instructor. LEC 
POLS 706 Research Methods I (3). An introduction to quantitative research methods in political science: the philosophy of science, research design, and data acquisition. Prerequisite: Graduate standing, POLS 705, or consent of instructor. LEC 
POLS 707 Research Methods II (3). This course covers basic techniques for multi-variable analysis, focusing on multiple regression. Topics can include interpretation of regression statistics, diagnostics for common problems, dummy variables, instrumental variables, basic time series methods including adjustment for autocorrelated error, logistic models, and nonlinear modeling; additional techniques may be covered at the discretion of the instructor. Prerequisite: POLS 706. LEC 
POLS 708 Advanced Qualitative Research Methods (3). An examination of qualitative research approaches frequently employed within political science. Topics may include case studies, archival and documentary research, content analysis, interviewing and focus group techniques, ethnographic fieldwork, narrative and discourse analysis, and others. The course will examine the strengths and limitations of these methods in relation to major research traditions such as cultural analysis, political institutionalism, rational choice, and constructivism. Prerequisite: POLS 705 and either graduate standing or consent of instructor. LEC 
POLS 709 Topics in Political Theory: (3). At the discretion of the instructor, this course will select one or more important areas of political theory for in-depth analysis. Prerequisite: Six hours in Political Theory. RSH 
POLS 711 The Psychological Base of Political Behavior (3). Examination of the relations between psychological mechanisms and social milieu factors and individual political behavior. Particular attention is devoted to understanding the development of politically relevant psychological traits and dispositions, and to the methodology employed in studying the socio-psychological factors which underlie individual political behavior. Prerequisite: Twelve hours of political science and consent of instructor. LEC 
POLS 712 The Electoral Process (3). A study of the characteristics of voting behavior and the influences upon such behavior. Emphasis is placed upon relevant research findings concerning partisanship and participation in politics, and on the methodology employed in the study of political behavior. Prerequisite: Twelve hours of political science and consent of instructor. LEC 
POLS 713 Law and Society (3). A study of the province and function of law in the context of social, economic, and political factors. The scope of the course will be determined by the interests of the instructor and the students, and may include the study of the legal aspects of law reform, constitutional law, administrative procedures, criminal justice, and the legal systems of different countries. Prerequisite: Twelve hours of political science and permission of instructor for undergraduates. LEC 
POLS 716 Political Behavior (3). A seminar for students interested in understanding the public opinion, voting, and other forms of political participation. This course will include a study of the role of the formation, measurement of political attitudes as well as an examination of protest and other forms of extra-legisal participation. Prerequisite: Graduate standing or consent of instructor. LEC 
POLS 719 Topics in the American Political Institutions: (3). A seminar to be offered as occasion demands, dealing with, but not limited to special topics in the presidency, congress, and judicial processes. Prerequisite: Graduate standing or consent of instructor. LEC 
POLS 720 The Scope of Public Policy (3). Introductory graduate course in the examination of public policy making. Considers institutions, basic theoretical frameworks, and standard methods, and places policy-making within a broad political context. Emphasizes American government. Prerequisite: Twelve hours of political science. LEC 
POLS 722 Intergovernmental Relations (3). A survey of the characteristic legal, political, and administrative relationships among different units of American government, with particular emphasis on the role of state agencies. Prerequisite: Nine hours of political science. LEC 
POLS 726 Public Policy in Comparative Perspective (3). This seminar examines the application of policy theory in regional and comparative contexts. Much of the research examined focuses on comparative public policy, but select weeks focus on specific regions of the world to help understand how differences in the nature of political interests affect the efficacy of policy. Topics may include: LEC 
POLS 740 Comparative Political Behavior of Women: (3). A study of the role of women in political life in the United States and in other countries. Prerequisites: POLS 150 or consent of instructor. LEC 
POLS 741 Policy Analysis for International Administration (3). Analysis of the methodology of contemporary international relations and the formulation and implementation of public policy. Topics may include the following: political leadership in international organizations; diplomatic decision making; and the role of the United States in international policy. Prerequisite: Twelve hours of political science. LEC 
POLS 744 Inter national Law: Laws of Armed Conflicts (3). A study of the legal effects of acts of armed forces in time of war. Emphasis is placed upon the law of warfare, the law of neutrality, and the law of the law of the sea. Prerequisite: Twelve hours of political science. LEC 
POLS 747 International Relations of Asia (3). A seminar on topics in current international relations and the formulation and implementation of public policy in Asian countries. Prerequisites: LEC 
POLS 754 Politics and Government of Russia and the Central Eurasian States (3). The collapse of the Soviet system and the problems of transforming a central planned authoritarian state into a free market democracy. The roles of ethnic and national tensions, economic decay, and cultural factors. Prerequisite: Eight hours in the social sciences and/or history, including POLS 150, or consent of instructor. LEC 
POLS 758 Revolutionary Politics of Latin America (3). Primarily a comparative survey of revolutionary movements in Latin America. Prerequisite: University standing. LEC 
POLS 774 International Law (3). Study of topics in international law, relating these closely to the dynamics of international relations. Special emphasis will be given to regulating force, resolving disputes, the law of the sea, human rights, and emerging problem areas such as the environment, outer space, the oceanic seabed, and gene technology. Prerequisite: Six hours in the social sciences and modern history. LEC 
POLS 789 Topics in International Relations: (2-3). A study of selected problems in international relations. Prerequisite: Consent of instructor. RSH 
POLS 810 American Politics (3). A survey and critical analysis of recent theoretical developments and research focusing on national institutions, electoral behavior, and policy-making processes. Emphasis is given to conceptualizing and analyzing the changing nature of the American political system. LEC 
POLS 812 Political Psychology (3). A critical examination of the principal areas in current literature in political psychology, including psychological perspectives on mass political behavior, elite decision making, and international relations. Attention will be given to articulating and evaluating theories, constructing research questions and programs, and comparing methodologies. Prerequisite: POLS 820. LEC 
POLS 820 Policy Formation and Adoption (3). Survey of the literature on the institutional, socioeconomic, and political forces influencing the formulation and adoption of public policy, as well as policy change, at all levels of government. Topics include problem definition, agenda setting, and the methods of decision-making. This is a research seminar so students will be required to conduct original research project. LEC 
POLS 821 Policy Implementation and Analysis (3). An overview of the policy implementation process and the analysis of public policy. The course covers a variety of theories and methods related to the study of the implementation process, policy evaluation, policy implementation, and policy analysis. Prerequisite: POLS 820. LEC 
POLS 822 Public Policy and Administration (3). An exploration of the ways in which public policy is made in the United States, focusing on the role of the administrative government in the formulation, implementation, and evaluation. Various theories of policy-making and their applications to specific areas of public policy will be examined. LEC 
POLS 825 Public Policy and Urban Administration (3). An examination of policy development, implementation, and evaluation in the local government context. Various theories of the policy process and their application to municipal government are examined. (Same as PUAD 825.) LEC 
POLS 830 Advanced Research Methods for Public Policy (3). Research seminar organized around advanced quantitative and qualitative methods skills for research on American and comparative politics and public policy. The course will combine advanced statistical estimation procedures (e.g., hazard analysis, event history analysis, hierarchical “contextual effects” models) with methods for the collection and integration of qualitative data. This course is intended for Ph.D. students in the fields of American politics, comparative politics, and public policy. The course is open to Ph.D. students from other departments who have completed a course in intermediate regression analysis. Prerequisite: POLS 707 or similar graduate level course. LEC 
POLS 849 Law, Courts, and Public Policy (3). This course provides an overview of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, prisons, and welfare. Prerequisite: Twelve hours in the social sciences and modern history. (Same as PUAD 849.) Prerequisite: Graduate standing or consent of instructor. LEC 
POLS 850 Introduction to Comparative Politics (3). This course provides a graduate level introduction to the field of Comparative Politics. Among topics we will consider are: the history of comparative research; the major themes and major founding concerns of the field; methodological and epistemological debates; competing paradigms which had characterized Comparative Politics (structural-functionalism, culturalists, state-centrists, institutionalists, rational choice, and other); theory building and the role of area studies. LEC 243
POLS 851 Comparative Institutions and Government (3). This course provides a survey of the subfield of political institutions within Comparative Politics. Among the topics it will cover are: identifying regime types (democracy vs. non-democracy); comparative electoral systems; party systems; presidential vs. parliamentary systems; comparative legislatures; constitutional engineering and democratic transitions; and others. Prerequisite: POLS 850.LEC

POLS 852 Comparative Political Economy (3). This course provides a survey of some of the major works, research traditions, and current debates in the subfield of comparative political economy. This includes such topics as: The political economy of development and underdevelopment; dependency and world-systems theory; the relationship between economic development and democracy; capitalist development and democracy; the political economy of dual transitions; the political economy of privatization and structural adjustment; comparative welfare states; and comparative labor-business-government relations. Prerequisite: POLS 850. LEC

POLS 853 Comparative Social Politics (3). This course provides a survey of some major research traditions and current debates in the subfield of political sociology. This includes theories of social and cultural pluralism and ethnonationalism; social movements and protest; gender and politics; state-society relation; and religion and politics. Prerequisite: POLS 850. LEC

POLS 870 International Relations (3). Critical evaluation of the major approaches to international relations and their application to conflict and conflict resolution, foreign policy, and international political economy. LEC

POLS 878 Conducting and Analyzing Fieldwork in Developing Countries (3). An introduction to fieldwork and surveys conducted in developing and non-democratic countries. The course covers the challenges of conducting interviews and surveys in the developing world and the intent is to develop the research skills for data collection and fieldwork as well as evaluating an analyzing survey data collected by other researchers in developing countries. Prerequisite: POLS 705 or equivalent or consent of instructor. LEC

POLS 899N Thesis Research (1). Research course used to fulfill continuous enrollment requirement for master’s degree students. Hours cannot count toward degree. Must be graded Satisfactory/Unsatisfactory. RSH

POLS 899 Thesis (1-6). Enrollment for writing thesis for master’s degrees. The POLS 905 Complex Adaptive Systems, Agent-Based Modeling, and Computer Simulation (3). This seminar addresses the rapidly growing science of complex systems. Topics addressed include political, economic, ecological, and biological systems. Includes a survey of the theory of complexity and computer models that are used to study complex adaptive systems. The main focus is on agent-based models, but attention is also given to traditional cellular automata. Methods of designing, programming, and interpreting results of agent-based models are addressed. Students who have no formal training in computer programming are welcome in the course, but they should expect to do some extra work on fundamentals of programming. A preparatory course in Java, C++, Objective-C, or another object-oriented language would significantly facilitate the student’s research effort. SEM

POLS 906 Advanced Regression (3). Covers topics appropriate for a second course in regression analysis. The content will vary according to the interest of the instructor and students, but will generally include such topics as multiple imputation of missing data, the generalized linear model (GLM), and specialized models for longitudinal data. The course will include a review of the principles of maximum likelihood estimation and application of maximum likelihood estimation in the context of the statistical applications. SEM

POLS 907 Research Methods in International Studies (3). This course focuses on quantitative methods of research relevant to international relations and comparative politics. Topics will vary with the instructor and student interests, but may include time series analysis, classification algorithms, computer programming and computational modeling, simulation, event data and content analysis, and dynamic models. Prerequisite: POLS 707. LEC

POLS 908 Individual and Collective Choice (3). This course surveys rational choice theories of politics as they are applied to decisions by individuals and groups. Models of individual behavior are drawn primarily from economics and decision theory. The primary approaches to collective choice are social choice theory and game theory. Prerequisite: POLS 707. LEC

POLS 909 Topics in Methodology (3). An intensive seminar in a method (or a variety of relevant methods) of theoretical or empirical research designed for Ph.D. students only. Emphasis is on deepening the understanding and ability to use advanced methods of analysis. Prerequisite: Admission to the Ph.D. program. RSH

POLS 910 Research Seminar in American Government (2-3). A faculty and advanced graduate student research seminar focusing on political behavior. LEC

POLS 911 The U.S. Congress (3). This seminar employs various theoretical and methodological perspectives to explore the burgeoning post-1960 literature on Congress. Traditional subjects such as committees, parties, and elections are examined through application of contemporary analysis methods and computerized analysis of new data sources. Students will examine the typical patterns of behavior that characterize the politics of North America, Europe, and developed regions of Asia. Topics include corporatism and alternative forms of interest intermediation, economic theories of socialization and electoral choice and the role of the state; its finances, adaptation, and the problem of power and legitimacy. Prerequisite: POLS 850 or permission of instructor. LEC

POLS 912 Elections and Voting Behavior (3). A research seminar for students interested in theoretical and empirical approaches to the behavior of candidates, voters and contributors in campaigns and elections. The impact of campaign laws and other institutional influences will also be examined. LEC

POLS 913 Congress and Politics (3). Research seminar on various aspects of state and local government, such as reformed institutions, fiscal stress, citizen participation, and various policy problems. LEC

POLS 914 Political Behavior (3). Survey of various approaches to the analysis of political behavior, including an evaluation of each approach in terms of its utility in building empirically-based political theory. Examples of the application of the various approaches will focus upon the American political process. LEC

POLS 915 American Political Parties (3). A survey of the theories and research findings dealing with political parties in American politics, including third and minor parties. Topics to be covered include the development and evolution of the party system, the nature of party organizations, and the role of parties in the electoral process, the impact of parties upon public policy, and party reform. LEC

POLS 916 Group Politics (3). The focus of this course is upon the theories and research findings dealing with political groups in American politics, including interest groups, movement organizations, and other organizations. Topics to be covered include group mobilization and maintenance, group involvement in the political party and electoral processes, methods and strengths of group influence, and the impact of political groups on the policy process. LEC

POLS 917 The Presidency (3). An advanced research seminar for students interested in theoretical and empirical approaches to the American presidency. This seminar will examine the powers and organizations of the White House through a study of the literature. LEC

POLS 919 Topics in U.S. Government and Politics: (3). A seminar to be offered as occasion demands, focusing with, but not limited to, executive, legislative, federalism, and special problems in U.S. politics. LEC

POLS 920 Policy Analysis Research Seminar (3). Research seminar designed to apply public policy theory and policy analysis methods to evaluate the impact of public policies. Students will develop a research project to design and conduct original research with the intention of presenting the work at a professional conference or publishing the work in a professional journal. LEC

POLS 921 Public Law (3). This seminar is designed to initiate the advanced graduate student into research in judicial and legislative behavior. Students will become familiar with the legal and constitutional language that is used in building empirically-based political theory. Examples of the application of the methods of analysis are discussed in terms of the legal and constitutional structure of the United States and other countries. LEC

POLS 922 Theories of International Conflict (3). An introduction to international relations theory, with an emphasis on the norms, rules, and institutions that govern international politics. Topics will vary with the interest of the instructor and student. LEC

POLS 923 International Legal Relations (3). Study of the subfield of political institutions within Comparative Politics. LEC

POLS 924 Foreign Policy Analysis (3). Designed to acquaint students with the principles and methods of the modern foreign policy analysis. Topics will include rational actor models, collective and bureaucratic processes, societal influences, cognitive and psychological factors, and comparative foreign policy. Prerequisite: POLS 850. LEC

POLS 925 Comparative Electoral and Party Systems (3). This research seminar addresses the major theoretical and empirical issues in the study of electoral and party politics. In addition to evaluating the classic works of Arrow, Duverger, Lipset and Rokkan, Rae, and Taagepera and Shugart, students will assess contemporary work on electoral and party systems that has evolved from this source material. The course will address the design and reform of electoral systems, institutional rules and the strategic environment they create for political actors, the role of institutional and social factors in the development of political party systems, and the role of party and election administration. LEC

POLS 927 Theories of International Conflict (3). An in-depth survey of the philosophical and moral foundations of political conflict and international relations. LEC

POLS 929 Topics in Public Policy: (1-3). Study of selected topics in public policy. LEC

POLS 940 Teaching Political Science (1). A discussion of teaching methods and approaches. Students are expected to develop a personal teaching portfolio that describes their outlook on teaching political science and provides sample teaching materials. This course must be taken by all graduate teaching assistants and assistant instructors during the first year of their appointment. Grades are issued on a pass/fail basis. LEC

POLS 950 Research Seminar in International Studies (2-3). A faculty and advanced graduate student collegial research experience, focusing on comparative politics, area studies, and international relations, with faculty and students engaged in the production of scholarly research articles, books, and conference papers. Topics will be chosen by individual students with consent of the seminar professor. RSH

POLS 951 Mobilization (3). A study of how politicians, interest group leaders, and disaffected leaders organize citizens to act in or preclude them from acting in politics. LEC

POLS 952 Comparative Electoral and Party Systems (3). This research seminar addresses the major theoretical and empirical issues in the study of electoral and party politics. In addition to evaluating the classic works of Arrow, Duverger, Lipset and Rokkan, Rae, and Taagepera and Shugart, students will assess contemporary work on electoral and party systems that has evolved from this source material. The course will address the design and reform of electoral systems, institutional rules and the strategic environment they create for political actors, the role of institutional and social factors in the development of political party systems, and the role of party and election administration. LEC

POLS 955 Politics of Advanced Industrial Societies (3). Theory and research on the patterns of behavior that characterize the politics of North America, Europe, and developed regions of Asia. Topics include corporatism and alternative forms of interest intermediation, economic theories of socialization and electoral choice and the role of the state; its finances, adaptation, and the problem of power and legitimacy. Prerequisite: POLS 850 or permission of instructor. LEC

POLS 956 The Governments and Politics of Asia (2-3). A research seminar on selected topics and issues in the governments and politics of selected Asian countries. The particular focus each year will depend upon the instructor. LEC

POLS 957 Topics in Comparative Politics: (1-3). Study of selected topics in comparative government and politics. LEC

POLS 960 Politics of Developing Countries (2-3). LEC

POLS 961 The Politics of Culturally Plural Societies (3). This is an advanced graduate seminar that examines comparative studies of ethnic relations, race, sub-cultural cleavages, including ethnicity, language, religion and race. The course will first survey and critique competing theoretical explanations for the patterns of conflagrations that have occurred in co-ethnolinguistic groups in various societies. Students will then examine the utility of these theories in individual in-depth research papers which will be presented in class and critiqued by seminar participants. LEC

POLS 970 Foreign Policy Analysis (3). Designed to acquaint students with the principal theories, approaches and types of empirical analysis generally employed to examine foreign policy in the context of international relations and foreign policy. Topics include rational actor models, collective and bureaucratic processes, societal influences, cognitive and psychological factors, and comparative foreign policy. Prerequisite: POLS 850. LEC

POLS 972 Theories of International Conflict (3). An in-depth survey of theories and research on international conflict. Topics will range from anthropological studies of con-
flict in primitive societies to contemporary theories of nuclear conflict. The course will also cover current empirical research methodology and results of research on international conflict, as well as models of conflict processes. Prerequisite: POLS 870. LEC

**POLS 973 International Political Economy** (3). Provides an eclectic survey of major developments in the field. Topics include the intellectual origins of IPE, the historical evolution of the international system, North-South and Western trade, investment, and monetary relations; foreign aid, debt technology transfer, development, international economic institutions (e.g., IMF, IBRD, MNCs, etc.). (Same as SOC 973). Prerequisite: POLS 870 or consent of instructor. LEC

**POLS 974 International Mediation and Conflict Resolution** (3). The course examines the theory and practice of international mediation and other forms of third party intervention used to resolve interstate and nonstate disputes. Topics include explanations of mediation success and failure, conditions of conflict escalation where mediation is likely to be counterproductive or resisted by recalcitrant disputants, the ethics of intervention, citizen diplomacy, and the role of international organizations such as the United Nations. Prerequisite: POLS 870. LEC

**POLS 977 Ethics in International Relations Theory** (3). This course examines how issues of International Ethics have been treated in International Relations theory. This course begins by reviewing several theoretical perspectives of International Relations and how these perspectives have historically understood the role ethics plays in international politics. By the end of the semester, students should have a firm understanding of (1) the salient issues of international ethics in world politics and (2) whether and how IR scholars have (theoretically and methodologically) placed those issues in their research paradigms. The issue areas the course will cover include, but are not limited to, human rights doctrines, issues of economic and political justice, just war theory (jus ad bellum) and just conduct of war (jus in bello), and humanitarian intervention. The course will assess the role international law has played in stemming and/or punishing human rights abuses. Students will review several historical cases of genocide, as well as several cases of truth and reconciliation commissions. LEC

**POLS 978 Advanced Topics in International Relations Theory** (3). Intensive examination of key theoretical debates in international relations. Topics covered will include Classical Realism and Liberalism, Neorealism/Neoliberal debate, and post-structural critiques of mainstream international relations theory. Prerequisite: POLS 870. LEC

**POLS 979 Topics in International Relations:** (3). To be offered periodically when topics of special interest arise. LEC

**POLS 980 International Organizations** (3). Considers theoretical and empirical work on international governmental and non-governmental organizations (IOs). Specifically highlights the evolving scholarly debates regarding the function, design, and delegation of authority to IOs as well as their behavior and change. Explores these questions in depth through a wide range of cases, including comprehensive coverage of the United Nations, Bretton Woods Institutions, and the European Union, and their activities in issue areas concerning international security, trade, finance, development, humanitarian aid, and the environment. LEC

**POLS 981 Global Development** (3). Considers the nature and problems of development and underdevelopment from a cross-regional and interdisciplinary perspective. Deals with the historical origins of the enormous disparities in wealth that exist today, both between and within countries. Considers the explanations for those differences, prescriptions for how to narrow them, and specific cases (both successes and failures) from various regions of the globe. LEC

**POLS 993 Directed Readings** (1-5). Designed to meet the needs of graduate students whose study in political science cannot be met with present course. Prerequisite: Consent of instructor. RSH

**POLS 995 Directed Research** (2). Designed for advanced graduate students who are concurrently enrolled in or who will be enrolled in a subsequent seminar in one of the Research Seminars in American Government or International Studies. Students enrolling in this course should have the prior approval of the faculty member with whom they wish to conduct the research. RSH

**POLS 997 Preparation for the Comprehensive Examination** (1-6). An independent reading course for students preparing to take the Ph.D. comprehensive examination. May be taken for two semesters or six credits, whichever comes first. Graded on a satisfactory/unsatisfactory basis depending on the results of the comprehensive examination. RSH

**POLS 999 Doctoral Dissertation** (1-15). Enrollment for writing doctoral dissertations. THE

---

**Psychology**

**Acting Chair:** Ruth Ann Atchley, Fraser Hall, 1415 Jayhawk Blvd., Room 426 Lawrence, KS 66045-7540, [www.psych.ku.edu], (785) 864-4131

**Professors:** Bernstein, Biernat, Branscombe, Colombo, Chandall, Denney, Higgins, Holmes, Ingram, Juola, Kemper, Little, McCluskey-Fawcett, Muehlenhard, Roberts, Simpson, Steinmetz, Vernberg

**Associate Professors:** Batson, Baumgartel, Brehm, Crockett, Cromwell, Gallant, Hallenbeck, Kellas, Neuringer, Rosenfeld, Shontz, Wrightsman

**Assistant Professors:** Biggs, Deboeck, Gillath, Johnson, Landau, Malina, Preacher, Pressman, Wu

**Director of the KU Psychological Clinic:** Kirk

The department offers a single doctoral degree in psychology, which may be earned in social, cognitive, quantitative, developmental, or clinical psychology. Students enter with the expectation of earning the Ph.D. The department does not admit students seeking the terminal master’s degree. The department cooperates with related departments in joint Ph.D. programs in clinical child psychology, developmental and child psychology, and child language.

**Admission**

Students may write to the department for application materials or download program information and application materials from our Web site. Applicants must have earned either the bachelor’s degree or the master’s degree. Although most applicants have majored in psychology as undergraduates, this is not required. It is necessary, however, to have earned 15 credit hours in psychology, including a first course in statistics and a course in experimental psychology or psychological research methods. Admission is competitive. The Graduate Record Examination is required. The GRE subject test is preferred but not required. Prior research and relevant work experience, honors, awards, and other achievements are taken into account. The deadline for completed applications is December 1 for the following fall semester.

Submit your application online at [www.graduate.ku.edu](http://www.graduate.ku.edu).

Send all other requested application materials to:

**The University of Kansas**

Department of Psychology, Graduate Officer
Fraser Hall, 1415 Jayhawk Blvd., Room 426
Lawrence, KS 66045-7540

**M.A. Degree Requirements**

Within two years of first enrollment in the Ph.D. program, the student must earn at least 30 graduate credit hours, no more than 6 of which may be in courses offered by other departments. The student must complete an acceptable thesis based on an empirical study and pass an oral examination. The oral examination may cover the thesis as well as more general material. Courses required for the M.A. degree are determined in

---

International students in political science are eligible for the Harry S. Truman Good Neighbor Award. The award is given every year to two students interested in conflict resolution at the international level.

KU’s psychology doctoral program ranked 22nd in the nation among public universities in the 2009 edition of U.S. News & World Report’s “America’s Best Graduate Schools.”
consultation with faculty of the program in which the student is enrolled as part of the process of development of an individualized program. No more than 6 thesis hours may be applied to the 30 hours required for the M.A.

**Ph.D. Degree Requirements**

Although graduate education is offered through separate programs, each student prepares an individualized plan of study in consultation with faculty members. These plans indicate how the student proposes to fulfill the requirements for the M.A. and Ph.D. degrees, including all general requirements and conditions.

**Social Psychology.** The program is an intensive research training experience seeking students who are committed to empirical, scholarly work. The major research interests of faculty members are stereotyping, prejudice, and intergroup relations, person perception, close relationships, social competence and aggression, emotion and motivation, culture and psychology, and self and identity.

In addition to course work, the central requirement of the program is continuous involvement in research. Research opportunities range from laboratory experimentation to field research. Depending on backgrounds and goals, students may move from one research setting to another or concentrate on a particular type of research throughout their training.

**Requirements:** Students are guided by individually tailored plans called contracts. These describe sequences of learning experiences developed by the student and a three-member faculty committee. Beginning students are urged to enroll in basic courses in theory and research in social psychology and statistics. The contract specifies students’ long-range goals, specialties, other fields of psychology or related disciplines in which they will become proficient, plans for meeting the research skills requirement, proposed sequence of course work, research and teaching experiences they hope to obtain, plans for the M.A. proposal, comprehensive requirements and dissertation landmarks, and an approximate timetable. Contract details can be changed by agreement of the student and faculty committee. The contract is a general framework that permits students’ graduate work to be adapted to their interests and abilities and provides a standard against which progress can be assessed.

Students’ contracts must specify how the Foreign Language or Other Research Skills requirement is to be met (typically by taking six graduate statistics and research design classes) and must comply with other departmental and general rules including residence and time limits.

**Cognitive Psychology.** The program seeks students with the intellectual potential, motivation, and quantitative aptitude to engage in productive scholarship in a basic or applied area of interest. Interdisciplinary training is also available in

- **Cognitive neuroscience**
- **Developmental science**
- **Aging and cognition**
- **Child language**
- **Quantitative methods**

The training program emphasizes the development of a broad-based foundation in theory, research methods, technical skills, and quantitative analysis for application in a variety of basic and applied research settings. Areas of focus of current faculty members include memory, cognitive development, language, perception, attention, aging, and cognition.

Recent graduates have found employment in academic programs, research organizations, and applied research units in industry and government. The rate of employment for graduates is very high. General program requirements are listed below. Applicants are encouraged to consult the department’s Web site for details.

The admission process includes evaluation of submitted materials and may include additional interviews by individual faculty members, as appropriate. The program follows a mentorship model; students are admitted to work with specific faculty members rather than to the program at large. During the application process, applicants are encouraged to contact faculty members with whom they are interested in working.

**General Program Requirements** (with recommended completion time)

- Research activity (continuous)
- Course requirements (before oral comprehensive examinations)
- Master’s thesis and oral defense (year two or three)
- Written preliminary examination (year three or four)
- Foreign Language or Other Research Skills (FLORS) requirement (year three or four)
- Comprehensive oral examination (year four or five)
- Dissertation and oral defense (year five or six)

**Course Requirements.** Statistics/Methods Core

- PSYC 790 Statistical Methods in Psychology I
- PSYC 791 Statistical Methods in Psychology II
- PSYC 982 Issues in Scientific Conduct
- PSYC 983 Methodology

**Content Core (9 hours by the end of the second year)**

- PSYC 723 Advanced Cognitive Psychology
- Plus two subsequent classes in spring semester; these have previously included
  - PSYC 725 Cognitive Neuroscience
  - PSYC 737 Topics in Psycholinguistics
  - PSYC 757 Theories of Perception
  - PSYC 831 Advanced Human Learning and Memory

**Breadth/Depth (12 hours before oral comprehensives)**

- Breadth I and II
- Depth I and II

Breadth/depth courses may come from a number of sources, depending on student interests and adviser suggestions. Students are expected to use this requirement to gain additional specialization in two areas in addition to cognitive psychology. Examples include Quantitative (courses in psychology and PSE), Language (courses in linguistics or speech-language-hearing), Neuroscience (courses in psychology, biology, or pharmacology), Philosophy, or Computer Science. These courses also can be used to help meet FLORS requirements with breadth goals set out by the adviser.

**Seminar** (continuous enrollment)

- PSYC 902 Proseminar in Experimental Psychology

**Quantitative Psychology** ([www.quant.ku.edu](http://www.quant.ku.edu)). The program provides a unique doctoral training experience. Graduate students are trained as quantitative specialists who can interface quantitative methods with substantive issues across the behavioral and social sciences. Students develop a substantial background in quantitative methods. Some students pursue more depth in quantitative content areas, and some pursue complementary expertise in a nonquantitative content area (e.g., clinical, cognitive, developmental, health, social). The exact nature of a student’s nonquantitative focus depends on the interests and goals of the student and the faculty mentor. Current methodological interests include psychometric methods, item response theory, structural equation modeling, multivariate statistics, multilevel mod-

---

Counseling and Psychological Services at Watkins Memorial Health Center provides personal counseling to KU students. Call (785) 864-2277.

An interdepartmental program in clinical child psychology is available. See Clinical Child Psychology in this chapter of the catalog for information.
eling, nonparametric statistics, and other topics in quantitative methods as applied in the behavioral and social sciences.

Recent graduates are employed in academic programs, basic research units in academic and organizational settings, applied research, and freelance consultation. Nearly all graduates proceed directly to full-time employment. About half the positions are academic. Nearly all include some research and service duties. A minority of graduates pursue additional graduate programs. Quantitative specialists have substantial technical expertise that provides an advantage in the job market. They often earn higher starting salaries and have access to additional income-enhancing activities such as grants and departmental consulting.

The program requires a total of 58 nonthesis hours (15 courses).

Requirements are as follows:

Quantitative Training

Quantitative Foundations (8 hours). Quantitative foundations include two semesters of basic psychological statistics, offered yearly:

- PSYC 790 Statistical Methods in Psychology I
- PSYC 791 Statistical Methods in Psychology II

Area-specific Methodology (One course, 3 hours minimum). Students in any of the department's majors or programs for experience in teaching, statistical consulting, and data analysis through em-

- PSYC 815 Studies in the Teaching of Psychology
- PSYC 816, PSYC 818, PSYC 819

Quantitative Core (Six courses, 23 hours minimum). The quantitative core is a more intense series of courses in fundamental quantitative areas, currently including:

- PSYC 887 Factor Analysis
- PSYC 879 Applied Nonparametric Statistical Methods
- PSYC 892 Test Theory
- PSYC 893 Multivariate Analysis
- PSYC 894 Multilevel Modeling
- PSYC 895 Categorical Data Analysis

Quantitative Concentration (Three courses, 9 hours minimum). The quantitative concentration focuses on a range of specialized applications, currently including:

- PSYC 990 Methods for Clustering and Classification
- PSYC 991 Longitudinal Data Analysis
- PSYC 992 Seminar: Advanced Quantitative Topics

Quantitative Concentration (Six courses, 23 hours minimum). The quantitative concentration is fulfilled by taking three or more courses in a specialized area, education (e.g., testing, evaluation), mathematical statistics, or a tailored curriculum that meets the goals and objectives of the student (e.g., business).

General Requirements

- M.A. thesis (1-9 hours plus public defense, typically completed by the end of the second year of training, three-person committee).
- Comprehensive written and oral examinations (review paper, dissertation proposal, elaborate project, or written examination plus public defense, typically completed by the end of the third year or early in the fourth year of training, five-person committee with one outside member).
- Foreign Language or Other Research Skills (FLORS) requirement (typically met by demonstrating competence in one or more computational languages enabling specialized study in quantitative methods). Proficiency is determined by a review of the student's body of work by the program director and the student's dissertation adviser at the completion of the written comprehensive examination.
- Dissertation (1-12 hours plus public defense, five-person committee with one outside member).

Additional Graduate Experiences. Quantitative psychology students have opportunities for experience in teaching, statistical consulting, and data analysis through employment in various settings. Students are also expected to participate and assist with our regular summer training institutes on advanced quantitative techniques (www.quant.ku.edu/StatsCamps/overview.html). Opportunities may include teaching under-graduate statistics in psychology, research workshops in quantitative projects, assisting in research at an institute such as the Institute for Life Span Studies, or working in the Research Design and Analysis unit. Students have access to quantitative workshops, a brown-bag employers meet regularly by the quantitative psychology program. Workshops are conducted by national leaders in quantitative methods. Special resources for attending national workshops and conventions are also available.

Quantitative Minor. A minor in quantitative psychology is offered for graduate students in any of the department’s major programs and for select programs in the College of Liberal Arts and Sciences (e.g., sociology). The quantitative minor is an add-on to the regular program and does not replace any existing or future requirements of the student’s major program. Students desiring a major emphasis in quantitative psychology should apply directly to the quantitative psychology program.

The minor consists of advanced course work in statistics, measurement, and methodology. The quantitative minor provides the student with elevated levels of quantitative expertise to enhance the overall quality of the research program. It gives students a competitive edge in the job market. Many faculty positions now require expertise in both a specialized area and quantitative methods. Advanced quantitative skills also offer students additional job opportunities. The quantitative minor provides the additional credentials needed to pursue these jobs.

Requirements include six courses in quantitative methods. The minor requires six core courses (i.e., PSYC 790). The classes normally are taken in the department but can come from other departments with approval. Currently available courses include Categorical Methods, Nonparametric Statistics, Multivariate Method-

- PSYC 790 Statistical Methods in Psychology I
- PSYC 791 Statistical Methods in Psychology II
- PSYC 879 Applied Nonparametric Statistical Methods
- PSYC 892 Test Theory
- PSYC 893 Multivariate Analysis
- PSYC 894 Multilevel Modeling
- PSYC 895 Categorical Data Analysis
- PSYC 896 Structural Equation Modeling I

Quantitative Concentration (Three courses, 9 hours minimum). The quantitative concentration focuses on a range of specialized applications, currently including:

- PSYC 990 Methods for Clustering and Classification
- PSYC 991 Longitudinal Data Analysis
- PSYC 992 Seminar: Advanced Quantitative Topics
- PSYC 996 Structural Equation Modeling II

Advanced courses offered in other departments or schools also may be taken with the director’s consent.

PSYC 881 Proseminar in Quantitative Behavioral and Social Sciences (Six semesters, 1 hour per semester, 6 hours minimum). The quantitative proseminar is an ongoing discussion series covering advanced topics and emerging issues.

Courses will be added to these offerings. In addition, students complete at least one semester of a Research Methodology course. Methodology courses associated with the different substantive foci are available.

Minor Concentration (Three courses, 9 hours minimum, e.g., Cognitive Psychology, Developmental Psychology, Health Psychology, Social Psychology, Education, Mathematical Statistics). The minor concentration is fulfilled by taking three or more courses in a specialized area, education (e.g., testing, evaluation), mathematical statistics, or a tailored curriculum that meets the goals and objectives of the student (e.g., business).

General Requirements

- M.A. thesis (1-9 hours plus public defense, typically completed by the end of the second year of training, three-person committee).
- Comprehensive written and oral examinations (review paper, dissertation proposal, elaborate project, or written examination plus public defense, typically completed by the end of the third year or early in the fourth year of training, five-person committee with one outside member).
- Foreign Language or Other Research Skills (FLORS) requirement (typically met by demonstrating competence in one or more computational languages enabling specialized study in quantitative methods). Proficiency is determined by a review of the student’s body of work by the program director and the student’s dissertation adviser at the completion of the written comprehensive examination.
- Dissertation (1-12 hours plus public defense, five-person committee with one outside member).

Additional Graduate Experiences. Quantitative psychology students have opportunities for experience in teaching, statistical consulting, and data analysis through employment in various settings. Students are also expected to participate and assist with our regular summer training institutes on advanced quantitative techniques (www.quant.ku.edu/StatsCamps/overview.html). Opportunities may include teaching under-graduate statistics in psychology, research workshops in quantitative projects, assisting in research at an institute such as the Institute for Life Span Studies, or working in the Research Design and Analysis unit. Students have access to quantitative workshops, a brown-bag employers meet regularly by the quantitative psychology program. Workshops are conducted by national leaders in quantitative methods. Special resources for attending national workshops and conventions are also available.

Quantitative Minor. A minor in quantitative psychology is offered for graduate students in any of the department’s major programs and for select programs in the College of Liberal Arts and Sciences (e.g., sociology). The quantitative minor is an add-on to the regular program and does not replace any existing or future requirements of the student’s major program. Students desiring a major emphasis in quantitative psychology should apply directly to the quantitative psychology program.

The minor consists of advanced course work in statistics, measurement, and methodology. The quantitative minor provides the student with elevated levels of quantitative expertise to enhance the overall quality of the research program. It gives students a competitive edge in the job market. Many faculty positions now require expertise in both a specialized area and quantitative methods. Advanced quantitative skills also offer students additional job opportunities. The quantitative minor provides the additional credentials needed to pursue these jobs.

Requirements include six courses in quantitative methods. The minor requires six core courses (i.e., PSYC 790). The classes normally are taken in the department but can come from other departments with approval. Currently available courses include Categorical Methods, Nonparametric Statistics, Multivariate Methods, Structural Equation Modeling I and II, Test Theory, Factor Analysis, Clustering and Classification, and regularly offered Advanced Topics in Quantitative Psychology seminars with varying topics.

For more information, contact Todd D. Little, yhat@ku.edu.

Developmental Psychology. Training in developmental psychology is interdisciplinary and collaborative. The developmental emphasis profits significantly from affiliated faculty in other academic units such as Speech-Language-Hearing; Sciences and Disorders, the School of Education, and doctoral programs in Clinical Child Psychology, Child Language, Gerontology, and Neurosciences. The developmental emphasis is substantively linked to the Schiefelbusch Institute for Life Span Studies, the Kansas Intellectual and Developmental Disabilities Research Center, and the Center for Biobehavioral Neurosciences in Communication Disorders. Many of the developmental psychology faculty have affiliations with more than one entity on campus. This breadth offers students multidisciplinary exposure and experiences that train them to conduct cutting-edge research on developmental phenomena across the life span. The program includes a number of concentrations, including cognitive, social, evolutionary, language, and quantitative. Students work with a faculty mentor to customize a concentration that suits the needs of the student and the expertise of the available faculty. The program is appropriate for students who wish to be trained in the traditional divisions of psychology (e.g., cognitive-developmental, social-developmental, quantitative-developmental) as well as those whose interests may not fall squarely within traditional divisions.

Curriculum. The curriculum involves 35 hours of formal developmental courses in addition to master’s, Foreign Language or Other Research Skills (FLORS), and dissertation research hours. Students are expected to enroll in a biweekly Proseminar on Developmental Science (6 semesters minimum). The program allows students to pursue their developmental research interests and accumulate academic credentials that give access to the job market of their choice. Formal course requirements are as follows:

Statistics, Design, and Professional Issues (14 hours)

- PSYC 790 Statistical Methods in Psychology I (4 hours)
- PSYC 791 Statistical Methods in Psychology II (4 hours)
- PSYC 815 Design and Analysis for Developmental Research
- PSYC 982 Issues in Scientific Conduct

Core Developmental Courses (12 hours)

- PSYC 691 The Psychology of Aging
- PSYC 870 Cognitive Development
- PSYC 875 Social Development
- PSYC 923 History and Systems of Developmental Psychology: Developmental Theory

Concentration (9 hours, minimum). The concentration builds expertise in an area chosen by the student in conjunction with the faculty adviser. Courses offered outside the department may count toward the concentration. The concentration can be either very focused or a uniquely tailored hybrid of courses. Some examples of concentrations that students may create are listed below. Many related courses may be substituted for the same general theme of the concentration and students can create a concentration that fits with their interests and educational objectives. Possible concentrations include:

General Cognitive Development

- PSYC 723 Advanced Cognitive Psychology
- PSYC 800 Experimental Psychology: Cognition and Aging
- PSYC 872 Attention, Perception, and Learning in Infancy

Social-Personality Development

- PSYC 777 Social Psychology: Theory, Research, and Clinical Applications

Social Development

- PSYC 670 Theories of Personality
- PSYC 962 Advanced Personality

Qualitative Developmental Methods

- PSYC 896 Structural Equation Modeling I
- PSYC 996 Structural Equation Modeling II
- PSYC 993 Multivariate Analysis

Note: Such a concentration also lends itself to completing a graduate minor in quantitative psychology and satisfying the FLORS requirements.

Developmental Educational Psychology

- PSYC 993 Seminar: Developmental Educational Psychology
- BIOL 625 Behavioral Ecology and Sociobiology
- BIOL 668 Evolutionary Ecology
Clinical Psychology. The program educates students about content issues that define a minimum knowledge base and processes of learning and problem-solving. All students take basic course work and practice in academic/research and clinical application. Students may take electives or practice to augment either aspect of training. About half the graduates pursue academic/research-oriented careers, and the rest undertake careers emphasizing applied activities (e.g., psychotherapy in community mental health centers or hospitals). Information is available from the graduate admission secretary or online at www.psych.ku.edu/clinprog.

Health and Rehabilitation Specialty. Work centers on the psychosocial and biomedical aspects of physical health, illness, and disability. Students apply the knowledge and techniques to problems of prevention, assessment, treatment, and rehabilitation. A detailed overview is available from the graduate admission secretary or online at www.psych.ku.edu/clinprog.

Requirements. Individual plans of study are designed to meet the standards established by state licensing boards and professional organizations. Individualization is achieved by selecting among alternate ways of meeting specific requirements and by selected electives or choosing the health and rehabilitation emphasis. The plan of study constitutes an agreement between the student and the entire clinical faculty. Program requirements:

**General Core Requirements for Clinical Psychology** (12-14 hours)
- PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance
- PSYC 791 Statistical Methods in Psychology II or PRE 810 Regression Analysis

**Cognitive Bases of Behavior.** One course from the following:
- PSYC 723 Advanced Cognitive Psychology
- PSYC 725 Cognitive Neuroscience
- PSYC 800 Experimental Psychology: Cognition and Memory
- PSYC 800 Experimental Psychology: Developmental Cognitive Neuroscience
- PSYC 800 Experimental Psychology: Memory, Emotion, and Development
- PSYC 851 Advanced Human Learning and Memory
- PSYC 870 Cognitive Development
- PRE 807 Theories and Research in Human Learning
- PSYC 775 Advanced Social Psychology I
- PSYC 775 Advanced Social Psychology II (Current Issues)
- PSYC 825 Social Development

**Clinical Requirements** (48 hours). Eight content courses:
- PSYC 886 Diversity Issues in Clinical Psychology or PRE 875 Cross Cultural Counseling
- PSYC 899 Proseminar: Professional Issues in Clinical and Health Psychology
- PSYC 946 Theories and Methods of Psychotherapy
- PSYC 960 Advanced Psychopathology
- PSYC 961 Biological Foundations of Psychopathology
- PSYC 968 Research Methods in Clinical Psychology
- PSYC 975 Professional and Ethical Problems in Clinical Psychology or PRE 900 Legal, Ethical, and Professional Issues in Professional Psychology

Note: Because this is an American Psychological Association-approved clinical program, the faculty expect all students to operate within the APA Code of Ethics in professional and personal behavior. Adherence to the ethical principles is part of the normal evaluation of students during the degree program.

**Seven Courses Covering Practicum Course Work (21 hours)**
- PSYC 850 Assessment I: Foundations of Psychological Assessment
- PSYC 855 Assessment II: Integrative Psychological Assessment
- PSYC 964 Clinical Practicum I
- PSYC 963 Clinical Practicum II
- PSYC 966 Clinical Practicum III
- PSYC 969 Clinical Practicum IV or PSYC 835 Clinical Practicum IV: Health
- PSYC 970 Clinical Practicum V or PSYC 836 Clinical Practicum V: Health

**Research Skill Proficiency.** This requirement normally is met by completing all of the following with a grade of B or higher in each:
- PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance
- PSYC 791 Statistical Methods in Psychology II or PRE 810 Regression Analysis
- PSYC 791 Statistical Methods in Psychology II
- PSYC 968 Research Methods in Clinical Psychology
- PSYC 968 Research Methods in Clinical Psychology

**Electives/Independent Study** (minimum of 9 credit hours). Because a minimum of 84 hours of graduate credit is required for the degree, the hours not included in the requirements above may be elective courses selected by the student and her or his adviser.

Examinations: Task. Each student must propose and demonstrate competence in one task or project. This task typically is done during the third year. It may be in applied clinical, research/methodology, or program evaluation. A complete description is available from the clinic office or online at www.psych.ku.edu/clinprog.

Upon completion of all degree requirements except the dissertation and internship, the student must pass the oral comprehensive examination. This examination addresses a proposal for the dissertation as well as related, general questions in the field. It should be taken before completion of four calendar years for students entering with the B.A. and three years for students entering with the M.A. The faculty believes that the student is best served by completing the entire dissertation before the internship.

**Internship** (3 hours). Students must complete a 12-month predoctoral internship at a setting approved by the clinical psychology faculty. Clinical students may complete their internships at any setting approved by the American Psychology Association.

**Psychology Courses**
- PSYC 500 Intermediate Statistics in Psychological Research (3).
- PSYC 502 Human Sexuality (3).
- PSYC 510 Infant Behavior and Development (3).
- PSYC 511 Laboratory Research In Infant Behavior (3).
- PSYC 518 Human Memory (3).
- PSYC 520 Memory and Eyewitness Testimony in Children (3).
- PSYC 531 Language Development (3).
- PSYC 535 Developmental Psychopathology (3).
- PSYC 536 The Psychology of Language (3).
- PSYC 545 Culture and Psychology (3).
- PSYC 550 Psychology of Reading (3).
- PSYC 555 Evolutionary Psychology (3).
- PSYC 565 Applied Developmental Psychology (3).
- PSYC 566 Psychology and the Law (3).
- PSYC 570 Group Dynamics (3).
- PSYC 572 Psychology and International Conflict (3).
- PSYC 575 Psychology of HIV/AIDS (3).
- PSYC 578 Social Attitudes (3).
- PSYC 581 Psychology of Religion (3).
- PSYC 590 Nonverbal Communication (3).
- PSYC 592 Psychological Significance of Physical Illness and Disability (3).
- PSYC 598 Positive Psychology (3).
- PSYC 602 Basis and Nature of Individuality (3).
- PSYC 604 Psychological Tests (3).
- PSYC 605 Health Psychology (3).

KU’s doctoral program in clinical psychology is ranked 18th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.

KU’s program in clinical child psychology is ranked 13th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
PSYC 606 Sex Role Development (3).
PSYC 610 Advanced Personality (3).
PSYC 613 History and Systems in Psychology (3).
PSYC 614 Basic Processes of Visual Perception (3).
PSYC 616 Foundations of Learning (3).
PSYC 618 Experimental Psychology: Human Learning (6).
PSYC 620 Experimental Psychology: Sensation, Perception, and Cognition (6).
PSYC 622 Experimental Psychology: Social Behavior (6).
PSYC 624 Experimental Psychology: Clinical Psychology (6).
PSYC 625 Experimental Psychology: Methods in Neuropsychology and Psychophysiology (6).
PSYC 626 Psychology of Adolescence (3).
PSYC 630 Clinical Psychology (3).
PSYC 632 Advanced Child Behavior and Development (3).
PSYC 642 The Psychology of Families (3).
PSYC 646 Mental Health and Aging (3).
PSYC 650 Statistical Methods in Behavioral and Social Science Research I (4).
PSYC 651 Statistical Methods in Behavioral and Social Science Research II (4).
PSYC 652 Behavior Therapy (3).
PSYC 660 Values and Caring (3).
PSYC 662 Industrial and Organizational Psychology (3).
PSYC 668 Fundamentals of Psychanalytic Psychology (3).
PSYC 670 Theories of Personality (3).
PSYC 678 Drugs and Behavior (3).
PSYC 679 Applied Nonparametric Statistical Methods (4).
PSYC 685 Human Factors Psychology (3).
PSYC 687 Factor Analysis (4).
PSYC 689 Conceptual Issues in Human Sexuality (3).
PSYC 690 Seminar: (1-5).
PSYC 691 The Psychology of Aging (3).
PSYC 692 Test Theory (4).
PSYC 693 Multivariate Analysis (4).
PSYC 694 Multilevel Modeling I (4).
PSYC 695 Categorical Analysis (4).
PSYC 696 Structural Equation Modeling I (4).
PSYC 704 Research Practicum in Clinical Child Psychology (3). This course provides students in the Clinical Child Psychology Program with the opportunity to enhance and consolidate their research activities by fulfilling one of the elective cluster course requirements. This practicum involves a contract with a research adviser and the program director. The contract includes definable products and dates for completion to prepare research for submission for publication, develop a grant proposal, or conduct additional research project independent of other requirements in the program. This course is not to be an overload, but is to be a full-time course schedule. May be repeated. (Same as ABSC 704, formerly HDFD 704.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC
PSYC 706 Special Topics in Clinical Child Psychology (3). A course offering detailed discussion of the literature and research methods of a special topic within clinical child and pediatric psychology. Topic and instructor may change by semester and will be announced in the Schedule of Classes. May be repeated. (Same as ABSC 706, formerly HDFD 706.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC
PSYC 710 Feminist Issues in Psychology (3). Detailed examination and discussion of psychological theory and research from a feminist perspective. Specific topics will vary. The goal of the course is to facilitate students’ ability to develop feminist critiques of existing research and theory as well as to generate nonexistent alternative approaches. Open to advanced undergraduates with consent of instructor. Prerequisite: Some familiarity with research methods in the social sciences. LEC
PSYC 723 Advanced Cognitive Psychology (3). Advanced cognitive psychology reviewing theories of pattern recognition, attention, working memory, language comprehension and problem solving. Emphasis will be placed upon the application of these theories to real-life situations. Prerequisite: PSYC 104 and six additional credit hours in psychology, or permission of the instructor. LEC
PSYC 725 Cognitive Neuroscience (3). A survey of the critical issues within cognitive and behavioral neuroscience. The course will provide information about neural physiology, functional neuroanatomy, and psychophysiological research methods. Human cognition and the neurophysiology that subserves the primary cognitive functions will be discussed. LEC
PSYC 735 Psycholinguistics (3). A detailed examination of issues in the processing of language. The course will provide a survey of research and theory in psycholinguistics, reflecting the influence of linguistic theory and experimental psychology. Spoken and written language comprehension and language production will be examined. (Same as LING 735.) LEC
PSYC 737 Topics in Psycholinguistics (3). An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, written language processing, neurolinguistics, prosody, and syntactic processing. (Same as LING 737.) Prerequisite: PSYC 735/LING 735 or consent of instructor. LEC
PSYC 750 Advanced Seminar in Gender Identity and Sexual Orientation (3). Design and execution of research on the causes and consequences of variations in gender identity, sexual orientation or affectional preference, sex roles, and sex-linked behaviors. Prerequisite: Consent of instructor. LEC
PSYC 757 Theories of Perception (3). A consideration of the facts and theories of human perception. The emphasis will be on vision, although hearing, touch, taste, smell, and other senses will also be discussed. Of particular concern is the question of perceptual modifiability and the response of the human observer to unusual sensory environments. Prerequisite: PSYC 104, LEC
PSYC 759 Forensic Psychology (3). Applications of psychological concepts and research findings to the courtroom and judicial process. Topics covered include dispute resolution, jury selection, expert witnesses, determination of competency, and criminal profiling. LEC
PSYC 774 Advanced Social Psychology I (3). First semester of a two-semester course. Designed to provide a thorough background in social psychology and to motivate a continuing exploration of theoretical problems and issues in the field. Combines examination of historical development of theories and methods in social psychology with the exploration of a variety of contemporary topics. LEC
PSYC 775 Advanced Social Psychology II (3). A continuation of PSYC 774. LEC
PSYC 777 Social Psychology: Theory, Research, and Clinical Applications (3). Basic theories in social psychology, as well as their applications to the process of coping with life events. The focus is on the nature of each theory, including the history and more recent developments; however, where clinical applications have been made of a particular theory, these will be discussed. LEC
PSYC 779 Physiological Aspects of Health and Disease (3). Provides an overview of pharmaceutical and psychosocial manifestations of health and disease for the graduate student in health and psychology. Content areas include overview of general anatomy and physiology of each body system, description of how deviations from normal anatomical development and physiological function result in common disorders, methods for distinguishing psychophysical from organic etiologies, indications and side effects of medications for common disorders, and description of roles of key members of the health care team. Prerequisite: Graduate students in psychology, nursing, and health-related fields, or by permission of instructor. LEC
PSYC 782 Research Methods in Child Language (3). A survey of methods for studying phonological, morphological, syntactic, and semantic change during language development. Methods include: diary interpretation, language sample analysis, probe elicitation tasks, and clinical assessment. (Same as LING 782.) Prerequisite: PSYC 735 or equivalent or consent of instructor. LEC
PSYC 784 Proseminar in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. (Same as COMB 784.) (Same as SFLH 784.) Prerequisite: Consent of instructor. LEC
PSYC 787 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABSC 787, AMS 767, COMS 787, and SFLH 787.) (Formerly HDFD 787.) LEC
PSYC 790 Statistical Methods in Psychology I (4). Elementary distribution theory: t-test; simple regression and correlation; multiple regression and multiple correlation; curvilinear regression; logistic regression; general linear model. Applications across the behavioral and social sciences are emphasized. Course consists of theoretical development and a review of the direct application of marketing and computing applications are taught. Prerequisite: A beginning course in statistics and graduate standing, or consent of instructor. LEC
PSYC 791 Statistical Methods in Psychology II (4). Continuation of PSYC 790. One-way analysis of variance, linear trends, contrasts, post hoc tests; multi-way analysis of variance for crossed, blocked, nested, and incomplete designs; analysis of covariance; repeated measures analysis of variance; general linear model. Applications across the social, educational, and behavior sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications will be taught. Prerequisite: PSYC 790 or equivalent, or consent of instructor. LEC
PSYC 792 Computer Analysis of Psychological Data (3). Application of computers in the analysis of data from descriptive and experimental investigations. Emphasis on the use of integrated statistical packages such as SPSS and BMDP. Prerequisite: An intermediate course in statistics. LEC
PSYC 795 Computing and Psychology (3). Introduction to the use of personal computers to facilitate and standardize administration of research protocols and to automate data collection. Lectures and projects emphasize direct application to research in the behavioral sciences. Prerequisite: Graduate standing in the Department of Psychology and consent of instructor. LEC
PSYC 796 Computer Models of Brain and Behavior (3). An introduction to the techniques of computer modeling and simulation of brain-behavior mechanisms. Early and contemporary efforts to simulate the neuron, neural networks, and neural processes which regulate behavior, are reviewed. Application of modeling techniques in sample brain-behavior problem areas are used to illustrate the operation of feedback, dynamic equilibrium, redundancy, pattern recognition, network structure, and similar constructs. Programming skill in a high-level language available on personal computers or mainframe is required. Prerequisite: EECS 128 or ECE 128, or PSYC 735, or PSYC 370, or equivalent courses or experience. LEC
PSYC 797 Advanced Programming Techniques for Psychological Research (3). An advanced course in programming IBM compatible desktop computers using the...
PSYC 815 Design and Analysis for Developmental Research
(3). A first course in scaling and modeling psychological processes. Substantive areas treated selected from sensation, perception, learning, memory, preference, choice and decision processes, problem solving, games, social interaction, and individual differences. May be repeated with permission. Prerequisite: Previous course work beyond the introductory level in psychology or a closely related area, in course statistics, and a course in calculus. LEC

PSYC 799 Proseminar in Child Language (2). A review and discussion of current issues in acquisition, assessment, and supervision. Rationale, administration, analysis, and grading S/F. (Same as ABSC 799, LING 799, and SPLH 799.) (Formerly HDFL 797). LEC

PSYC 800 Experimental Psychology: _____ (3). An advanced survey of theory and research in a selected area of experimental psychology. Continual enrollment for four semesters is required of entering graduate students in experimental psychology. Open to other students with graduate standing in psychology or a closely related field. May be repeated with permission. LEC

PSYC 802 Social-Psychological Aspects of Health, Disability, and Associated Life Stress (3). Disabling myths; perception of causes and effects of disease and disability; attitudes and interpersonal relations; hoping, coping, and reality issues; values; professional-client relations; public media and societal rehabilitation. A departmental seminar with a focus on current graduate research. Rationale, administration, analysis, and grading S/F. LEC

PSYC 805 History of Psychology (3). A historical survey of basic concepts and theories in psychology with emphasis on their relationship to contemporary problems in theory. LEC

PSYC 806 Professional Issues: Clinical Child Psychology (1). Consideration of special problems confronting the child and family oriented scientist-practitioner, and in the development of a professional identity. Topics include critical issues including ethical, legal, cultural, empirical, and clinical aspects of research and practice. May be repeated. (Same as ABSC 809, formerly HDFL 809.) Prerequisite: Graduate standing in clinical child psychology. LEC

PSYC 811 Achievement and Intellectual Assessment in Clinical Child Psychology (3). Course covers the basic theory, research, administration, and reporting of psychological assessment of development, intelligence, and achievement for children, adolescents, and adults within cultural and developmental contexts. The range of psychological instruments examined includes, for example, WIAT, K-ABC, WJ, S-B, WISC, WAIS, and WPPSI. (Same as ABSC 811.) Prerequisite: Graduate student in clinical child psychology. LEC

PSYC 812 Behavioral and Personality Assessment of Children (3). Lecture, laboratory, field work, and supervision appointment. Theory and applications in the psychological evaluation of children with standardized assessment techniques. The administration, scoring, interpretation, and reporting of behavioral and personality functioning in children. (Same as ABSC 812, formerly HDFL 812.) Prerequisite: Graduate standing in clinical child psychology. LEC

PSYC 814 Advanced Child and Family Assessment (3). Lecture, laboratory, field work, and supervision appointment. Supervised and independent assessment and rating scales and other techniques used as assessment approaches for children and families. Emphasis on interview, observation, psychometric scales, and consultation. Rationale, administration, analysis, and reporting of mental health functioning of children and families. Experience with clinical populations and children in foster care. (Same as ABSC 814. Formerly HDFL 814.) Prerequisite: Graduate student in clinical child psychology. LEC

PSYC 815 Design and Analysis for Developmental Research (3). Coverage of the philosophy and basic principles of group-design research, with a special emphasis on designs that are appropriate for developmental studies. Designs for both experimental and quasi-experimental research are covered, and appropriate statistical procedures are presented concomitantly with the designs. Individual-difference analyses and statistical control issues are also addressed. LEC

PSYC 816 Design and Analysis for Neuromaging Research (3). Course covers research design and analysis issues for event-related potential (ERP) and functional magnetic resonance imaging (fMRI) studies. Repeated measures, statistical parametric mapping, principal components analysis, and independent components analysis techniques are covered. Both practical and theoretical aspects of these statistical techniques will be explored in Matlab environment. Matrix algebra required but not required. Prerequisite: PSYC 790 and 791 or equivalent are required. LEC

PSYC 818 Experimental Research Methods in Social Psychology (3). Systematic discussion of the techniques of research in social psychology, with practice in the utilization of selected methods. Prerequisite: One course in social psychology in addition to introductory social psychology. LEC

PSYC 819 Field and Evaluation Research Methods in Social Psychology (3). Basic principles and methods of empirical research in social psychology and related fields; relationships between field and laboratory studies, special emphasis on survey and evaluation research methods and study designs; client and respondent relationships; research and public policy. LEC

PSYC 820 Developmental Research (3). A survey of the basic empirical research in the field of child development, covering intelligence, cognition, perception, attention, personality, social behavior, and socialization processes. These literatures are integrated and their implications for social application are addressed. (Same as ABSC 820, formerly HDFL 820.) Prerequisite: A course in child development or equivalent. LEC

PSYC 825 Social Development (3). A lecture and discussion course in social development. It includes such topics as theoretical approaches to the study of social development, as well as the literature on family processes, peer relations, aggression, attachment, and alternative family care, and the media. (Formerly PSYC 880.) (Same as ABSC 825.) Prerequisite: A course in child psychology or development. LEC

PSYC 831 Advanced Human Learning and Memory (3). An in-depth analysis of research and theory. Focus will be on experimental methodology in these areas. LEC

PSYC 832 Clinical Health Psychology I: Health Promotion and Disease Prevention (3). An overview of the field of health psychology as applied to health promotion. Areas include health behaviors that are prevalent in today’s society and current research regarding behavioral and psychosocial risk factors for disease, as well as empirically supported assessment and therapeutic techniques for risk factor reduction and health promotion. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 833 Clinical Health Psychology II: Acute and Chronic Illness (3). An overview of the field of health psychology as applied to acute and chronic illness in adult, adolescent, and child populations. Content areas include psychological aspects of acute and chronic illness, including relevant empirically supported assessment and intervention strategies, adherence to medical regimens, pain, and enhancement of the psychologist’s role in medical settings. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 834 Clinical Health Psychology III: Physical Aspects of Health and Disease (3). An overview of physical manifestations of health and disease. Content areas include overview of anatomy and physiology of each body system, description of how deviations form normal anatomical and physiological function result in disease, treatment and management of psychological and behavioral variables. For example, how do psychological factors and behaviors influence the onset, treatment, and prevention of disease? Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 835 Clinical Practicum IV: Health (3). Supervised assessment and treatment of individuals and families within a medical setting, as well as multidisciplinary consultation. Inpatient and outpatient clinical health psychology rotations may include pediatrics, oncology, pain, rehabilitation, and other health psychology related fields. Emphasis is on the function and training in psychological interventions, as well as the application of psychological strategies is on the use of empirically supported treatments where possible. Graduation on Satisfactory/ Fail basis. Prerequisite: PSYC 970 and graduate student in clinical health psychology specialty. FLD

PSYC 836 Clinical Practicum V: Health (3). Continuation of PSYC 835. Prerequisite: Graduate student in clinical health psychology specialty. FLD

PSYC 838 Pain and Its Management (3). Focuses on biological, cognitive/affective, and social causes and effects of pain. Emphasis on basic research methods in pain, origins of pain, and how the experience of pain alters many aspects of the individual’s life. Topics include anatomy and physiology of pain, impact of pain on a variety of aspects of individuals’ lives, treatments for pain, and the role of various health care professionals in treating pain. Discussions will also include basic research methods in pain, tools for assessing pain, barriers to adequate pain management, and ethical/legal/public policy issues in working with pain patients. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 839 Palliative Care in Health Psychology (3). Based on the biopsychosocial model, this course focuses on the current practice of palliative care in community and hospital settings by health care professionals. Classes will be discussion based, centered on current issues and controversies in care of the chronically ill and dying. Recent research will be included as appropriate. Students will be expected to identify applicable literature for presentation and class discussion, along with assigned readings. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 840 Psychology of Women (3). A seminar in the assessment of psychosocial and behavioral factors in women’s health. Content areas include women and the health care system, social roles and health, gender differences, and similarities in morbidity and mortality, gynecologic health, chronic diseases, and health-related behaviors. Prerequisite: Graduate student in psychology or health-related field, or by permission of instructor. LEC

PSYC 841 Stress and Coping (3). Theories and research on conceptualization, assessment, and effects of stress. Focus on coping processes and other determinants of adjustment to stressful conditions. Discussion of psychological interventions for managing stress and trauma. Prerequisite: Graduate student in psychology or related fields. LEC

PSYC 842 Specialized Health Psychology Practicum (1-3). Specialized advanced practicum clinical health psychology with an emphasis on areas of specialization as determined by student and instructor. Prerequisite: Consent of instructor. FLD

PSYC 843 Behavioral Pharmacology (3). Addresses psychological and behavioral effects of drugs, including psychotropic medications. A central theme is that effects of drugs frequently cannot be characterized solely from a pharmacological perspective. Thus, emphasis is placed on examining the behavioral and pharmacological and behavioral variables. For example, how do psychological factors moderate responses to drugs? The nature of this area assumes some knowledge of pharmacology, research methods, chemistry, pharmacology, and the nervous system. Specific course structure will be modified to suit student interests. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 845 Impression Formation and Interpersonal Behavior (3). Intensive investigations of the processes involved in impression formation and of the effects of established impressions upon interpersonal communications. (Same as COMS 835.) Graded on a satisfactory/fail basis. Prerequisite: PSYC 670 or COMS 555. LEC
The Department of Psychology offers programs in social, cognitive, quantitative, developmental, and clinical psychology.
PSYC 895 Categorical Data Analysis (4). Multivariate analyses of count data. Error models, statistical inference, logistic models, logit models, loglinear regression. Homogeneity, symmetry, and selected other topics. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 or equivalent, or consent of instructor. LEC

PSYC 896 Structural Equation Modeling I (4). Introduction to statistical methods for modeling latent variables. Topics include a review latent variables, covariance structures analysis, mean structures analysis, confirmatory factor analysis (CFA), structural equation modeling (SEM), multivariate CFA, longitudinal SEM, Hierarchical CFA, and Multi-trait Multi-Method SEM. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Prerequisite: PSYC 790 or equivalent, or consent of instructor. LEC

PSYC 897 Master's Thesis in Clinical Child Psychology (1-10). Supervised research experience completing thesis leading to master’s degree. (Same as ABSC 897.) RSH

PSYC 898 Proseminar: Professional Issues in Clinical and Health Psychology (3). Discussion of current theoretical, empirical, and applied issues in clinical and health psychology involving students, faculty, guest speakers. Prerequisite: Graduate student in clinical psychology. RSH

PSYC 899 Thesis (1-10). THE

PSYC 902 Proseminar in Experimental Psychology (1). Seminar in experimental psychology to be conducted in rotation by the experimental psychologists on the staff and a monthly visiting experimental psychologist. LEC

PSYC 905 Psychopathology in Children (3). Diagnosis and treatment of psychological problems in childhood and adolescence. (Same as ABSC 905.) Preference given to students studying child clinical psychology, psychology, and counseling psychology. Prerequisite: Fifteen hours of graduate credit in psychology or consent of instructor. LEC

PSYC 921 Seminar in Early Development (3). A seminar devoted to factors affecting early human development with some attention to theoretical formulations and the relevant animal literature. LEC

PSYC 923 History and Systems of Developmental Psychology: Developmental Theory (3). An intensive study of traditional and recent developmental theories with an emphasis upon the role of heredity, early stimulation, reinforcement, and modification as each affects the course of the development of children. LEC

PSYC 927 Seminar in Psychobiology (3). A detailed study of a specific research area dealing with the biological foundations of behavior. Each week will be assigned from the journal literature. LEC

PSYC 930 Research Seminar on Intimate Relationships (3). Consideration of current psychological theory and research on adult intimate relationships: friendship, dating, committed relationships, dissolution of committed relationships. Students will be expected to be involved in on-going empirical research in the area. Prerequisite: Graduate level courses in research design and statistics. LEC

PSYC 933 Seminar: The Measurement of Attitudes (3). An examination of the concept of attitude and the methods developed to assess the various aspects of attitudes. Prerequisite: PSYC 570 or consent of instructor. LEC

PSYC 935 Seminar in Group Dynamics (3). Intensive examination of selected problems in the functioning of small groups. May be taken for two semesters. LEC

PSYC 936 Group Therapeutic Techniques (3). LEC

PSYC 943 Advanced Practicum in Clinical Child Psychology III (1-3). Lecture, laboratory, field work, and supervision appointment. Advanced psychological intervention techniques for children, youth, and families; supervised progressive experience in application of behavioral and psychotherapeutic methods to behavioral and emotional problems. (Same as ABSC 943, formerly HDFL 943.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of ABSC 943 (formerly HDFL 943). Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 946 Theories and Methods of Psychotherapy (3). Comparative examination and analysis of major theories and approaches to psychotherapeutic interventions, core principles of therapeutic change, scientific approaches to establishing treatment efficacy, current intervention issues. Prerequisite: Nine hours in graduate clinical psychology or consent of instructor. LEC

PSYC 947 Advanced Practicum in Clinical Child Psychology V (1-3). A continuation of ABSC 947/1 (formerly HDFL 947) and PSYC 944. Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 949 Empirically Supported Treatment (3). This course provides an overview of theoretical and applied issues germane to the contemporary empirically supported treatments movement in clinical psychology. The course will include an in-depth examination of several psychotherapy protocols, e.g., cognitive therapy for depression which have been identified as 'empirically supported' by considerable attention accorded to implementation of the characteristic techniques of such interventions. LEC

PSYC 950 Clinical Supervision and Consultation: Theory and Research (1). Lecture, readings, and discussion of theory and research related to the practices of clinical supervision and consultation. Developmental and competency based approaches to supervision with exposure to other approaches. Professional issues, ethics, and multicultural aspects of supervision and consultation. Prerequisite: PSYC 905 or consent of instructor. LEC

PSYC 951 Clinical Supervision Practicum (1). Fieldwork in supervision under direction of instructor. Practice in supervision of clinical work, assessment, psychotherapy, and documentation. Prerequisite: Previous or concurrent enrollment in PSYC 950 and PSYC 968, or consent of instructor. FLD

PSYC 955 Close Relationships and Adult Attachment: Theory, Research, and Current Controversies (3). Review of attachment theory literature and the research it has generated in clinical developmental, personality, and social psychology. The course will allow discussion of a wide range of issues including the evolution of behavioral systems that underlie close human relationships, the developmental roots of relational styles and affect-regulation processes, the role of mental representations in interpersonal behavior, and some of the attachment and close relationship processes involved in good and poor mental health. Prerequisite: graduate standing or consent of instructor. LEC

PSYC 956 Social Neuroscience (3). Acquaint students with the Social Neuroscience approach as well as recent findings using this approach. The course will focus on (a) social phenomena and (b) consideration of future and emerging social neuroscience research examining these phenomena. (Same as ABSC 956, formerly HDFL 956.) Prerequisite: Completion of Ph.D. comprehensive exams and consent of instructor. LEC

PSYC 960 Advanced Psychopharmacology (3). Review of current nosology of adult psychopathological syndromes emphasizing development of diagnostic skills. Critical survey of recent research and theory related to the etiology, course, prognosis, and treatment of adult psychopathological conditions. Prerequisite: Graduate student status in clinical psychology, clinical child psychology, or counseling psychology. LEC

PSYC 961 Biological Foundations of Psychopathology (3). A review of fundamental topics in the neurosciences and their relevance to selected psychopathological disorders. The fundamental topics are taken from genetics, neuroanatomy, neurophysiology, and neurochemistry. The disorders include schizophrenia, depression, anxiety disorders, Alzheimer's disease, Parkinson's disease, and Huntington's disease. Prerequisite: Graduate student in clinical psychology or consent of instructor. LEC

PSYC 962 Advanced Research in Clinical Child Psychology (3). A survey of selected advanced topics in the area of personality. Includes review of theoretical and research issues in the area of personality. Prerequisite: Consent of instructor. LEC

PSYC 963 Clinical Child Psychology Internship (1). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved clinical child psychology internship setting. May be taken in up to five undergraduate or graduate-level placements. Prerequisite: Completion of full time child psychology internship placement. (Same as ABSC 963, formerly HDFL 963.) Prerequisite: Completion of Ph.D. comprehensive examinations and permission of the child psychology faculty. FLD

PSYC 964 Clinical Practicum I (1). Lecture, laboratory, and field work, and supervision appointment. Psychological evaluation and intervention, and in the clinical evaluation of intellectual, personality, and social functioning. Emphasis in selection of and training in psychological intervention strategies is on the use of empirically supported treatments where possible. Grading on Satisfactory/Fail basis. Prerequisite: Graduate student in clinical psychology program. FLD

PSYC 965 Clinical Practicum II (3). A continuation of PSYC 964. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 964 or permission of instructor. FLD

PSYC 966 Clinical Practicum III (3). A continuation of PSYC 965. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 964 or permission of instructor. FLD

PSYC 967 Psychotherapy with Families (3). Clinical approaches to marriage and family therapy. Intensive consideration of the theoretical positions, research findings, clinical methods, and technical problems in marriage and family therapy. Prerequisite: PSYC 946. LEC

PSYC 968 Research Methods in Clinical Psychology (3). Systematic consideration of research methods in clinical psychology including identification of a research
problem, selection of the research design and assessment strategies, and methods of evaluating these: PSY. The principles, pitfalls, artifacts, biases, and sources of controversy in research in this area are also covered. Prerequisite: Graduate standing in clinical or counseling psychology. LEC

PSYC 969 Clinical Practicum IV (3). Lecture, laboratory, field work, and supervision approaches to the psychological treatment of the individual, couple, family, and group client; supervised, progressive experience in the clinical application of psychotherapeutic treatment methods with emphasis on the use of empirically supported interventions where possible. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 966 or consent of instructor. FLD

PSYC 970 Clinical Practicum V (3). A continuation of PSYC 969. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 969 or consent of instructor. FLD

PSYC 974 Clinical Psychology Internship (1-3). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved clinical psychology field setting. Observation, supervision, and participation in the daily clinical and field affairs of psychologists. Required of all clinical psychology program students. An intensive guided experience in the application of clinical psychology theory, methods, and practices in a clinical psychology field setting. Integrations between research and clinical practice. Prerequisite: Completion of Ph.D. comprehensive examinations and consent of clinical psychology faculty. FLD

PSYC 975 Professional and Ethical Problems in Clinical Psychology (3). Interprofessional interactions, social and ethical issues, problems of practice, and problems in the clinical practice of psychology. Issues involving ethics in research will also be explored. Prerequisite: Consent of instructor. LEC

PSYC 976 Therapeutic Interventions with Children (3-5). Clinical approaches to the therapeutic treatment of children with emphasis on the integration of laboratory (practicum) experience. A survey of relationship therapists, operant strategies, system approaches, parent education and play therapy by the right therapist for a specific child with a particular problem. (Same as ABS 976.) Prerequisite: PSYC 966 or consent of instructor. FLD

PSYC 977 Specialized Clinical Practicum (1-4). Lecture; laboratory and field work, and supervision appointment. Specialized psychological services for the evaluation and/or treatment of the individual client or the group or the institution. Investigation of and experience in a special practicum area not covered in regular courses. Prerequisite: Students must consult with members of the clinical faculty and propose an acceptable project in advance of enrollment. FLD

PSYC 980 Special Problems in Psychology (1-5). Investigation of a special research problem or a classic case of investigation in an area not covered in regular courses. Prerequisite: Consent of instructor. RES

PSYC 981 Teaching Psychology (1). Discussion of the problems and techniques of teaching psychology at the undergraduate level. A minimum of one credit of this course must be taken by all assistant instructors during the two semesters of the first year of their appointment in the department. Only three hours may count toward the Ph.D. degree. LEC

PSYC 982 Issues in Scientific Conduct (3). Lectures and discussion on issues in the conduct of a scientific career, with emphasis on practical topics of special importance in behavioral science. Topics will include the academic and scientific roles of behavioral scientists, establishing a research lab, communicating research findings, tenure processes, gender equity, ethical conduct, and good scientific citizenship. Discussion will highlight important case studies (e.g., the Smith and Sph 982.) LEC

PSYC 983 Methodology (3). Inferential problems in experimental psychology. Prerequisite: PSYC 790 and PSYC 791 or consent of instructor. LEC

PSYC 984 Methods for Clustering and Classification (3). Statistical methods for identifying classes, clusters, and taxa. Topics include k-means, discriminant analysis, hierarchical clustering algorithms, additive trees, neural network models for clustering, latent class models, finite mixture models, and models for skills/cognitive diagnosis. Applications across the social, educational, and behavior sciences are emphasized. Prerequisite: PSYC 790 and PSYC 791 or equivalent. LEC

PSYC 985 Longitudinal Data Analysis (3). Reviews and contrasts various statistical methods for the analysis of change. Course focuses on various techniques to analyze longitudinal (repeated-measures) data beyond the repeated-measures ANOVA framework. Techniques covered included latent change scores, latent difference scores, individual-differences modeling (e.g., growth curve, mixed modeling) and growth mixture modeling. Applications across the social, educational, and behavior sciences are emphasized. Prerequisite: PSYC 980 or PSYC 971 or equivalent. LEC

PSYC 991 Longitudinal Data Analysis (3). Reviews and contrasts various statistical methods for the analysis of change. Course focuses on various techniques to analyze longitudinal (repeated-measures) data beyond the repeated-measures ANOVA framework. Techniques covered included latent change scores, latent difference scores, individual-differences modeling of latent residual and change scores, intra-individual differences modeling (e.g., growth curve, mixed modeling) and growth mixture modeling. Applications across the social, educational, and behavior sciences are emphasized. Prerequisite: PSYC 980 or equivalent, or consent of instructor. LEC

PSYC 993 Seminar: _____ (1-5). LEC

PSYC 996 Structural Equation Modeling II (3). Continuation of PSYC 896. Advanced applications of modern methods for testing hypotheses on multivariate correlational data in the behavioral and social sciences. Topics include advanced confirmatory factor analysis, mediation and moderation among latent variables, latent growth curve modeling, and other latent variable mean and covariance structure analyses techniques. Applications across the behavioral and social sciences are emphasized. Prerequisite: PSYC 896 or equivalent, or consent of instructor. LEC

PSYC 998 Doctoral Dissertation in Clinical Child Psychology (1-10). Research experience to prepare the dissertation. Application of the theory of the dissertation. (Same as ABS 998, formerly HDFL 998.) THE

PSYC 999 Dissertation (1-12). THE
three letters of recommendation (at least one should be academic); a current résumé; a sample of written work (academic work is preferred); and Test of English as a Foreign Language scores (international applicants). A program graduate or a faculty member may be assigned to interview applicants. Internship-option applicants must submit all application materials by February 1 to be considered for graduate fellowships. Career-option applicants are considered for fall and spring admission. Application deadlines are May 1 and July 1 for fall and October 1 and November 15 for spring.

Submit your application online at www.graduate.ku.edu.

The University of Kansas
Department of Public Administration, Attn: M.P.A. Admissions
Wescoe Hall, 1445 Jayhawk Blvd., Room 4060
Lawrence, KS 66045-7594

Degree Requirements. The master’s degree is awarded after successful completion of 37 credit hours of course work. This includes 50 hours of formal course work consisting of eight required courses and two elective courses. Students attend a series of workshops to earn one additional unit of credit.

With departmental assistance, internship-option students locate a nine-month, paid internship in a governmental agency. During the internship to earn the remaining 6 hours of credit, students attend three intensive professional development seminars on campus in the fall, winter, and spring. Career-option students and international students receive 6 hours of credit either for writing a field project report or for taking two elective courses.

All students must pass a written final examination to complete the requirements for the M.P.A. degree. The time limit for earning the degree is seven years.

M.P.A./J.D. Combined Program. The joint degree program is designed for the student who intends to combine career preparation in law and public administration. Examples of career objectives for this degree are the practice of law in communities (for example, a city attorney, who may be called upon to perform legal services for a municipality) and for city managers (who may need to deal with legal questions and interact with legal professionals). The program combines into four years the normal three-year J.D. program offered by the School of Law and the two-year M.P.A. program offered by the Department of Public Administration. Students must complete 115 total credit hours: 78 credit hours in the School of Law (42 required and 36 elective), 25 hours in the Department of Public Administration, and 12 hours of electives of which only 6 hours may be law courses.

Of the 25 required hours in public administration, 6 hours are earned during the internship in the fourth year. The internship may not be taken concurrently with course work. At the conclusion of the internship year, each candidate must successfully pass a final written examination administered by public administration. The J.D. degree is awarded at the completion of the total required credit hours other than those associated with the internship. The M.P.A. degree is awarded upon successful completion of the internship and final examination. All course work counted toward any master’s degree requires a B average for the award of the degree. Specifically, students should understand that if they elect 6 or fewer hours of law requirements, the grades received in those law courses are incorporated into the M.P.A. grade-point average, which must be 3.0 for the award of the M.P.A.

For admission a student must meet requirements of both programs. Dual admission involves submitting separate sets of application materials as required by the respective programs. The M.P.A./J.D. program is open to those who have earned baccalaureate degrees and whose undergraduate academic records indicate that they have the capacity to complete these graduate programs. Contact the Department of Public Administration or the Department of Urban Planning for more information.

See also Joint Degree Programs in the School of Architecture, Design and Planning chapter of this catalog.

Doctor of Philosophy Degree Admission. Admission is based on the applicant’s undergraduate and/or graduate academic record, standardized test scores, and references from instructors. All applicants must have completed a bachelor’s degree and an M.P.A. or equivalent degree. Students without an M.P.A. or equivalent degree must complete KU core M.P.A. requirements as part of their doctoral studies.

A completed application must include (1) application; (2) Graduate Record Examination results—verbal, quantitative, and analytical; (3) two-page statement of goals and research interests including evidence of research aptitude/interest; (4) three letters of recommendation preferably from faculty members who can comment on the applicant’s potential for doctoral study; (5) nonrefundable application fee (see Admission in the General Information chapter of this catalog); and (6) one official transcript from each college or university attended. In addition, international students must submit Test of English as a Foreign Language scores from an examination administered no more than two years before the date of application. Immigration requirements and a financial statement are available from the Office of International Student and Scholar Services, www2.ku.edu/~issfacts. All materials must be received before the application can be considered.

For fall admission and financial aid, the application file must be completed by January 25. Applicants who do not meet this deadline are unlikely to be considered for financial aid, even though applications may be considered throughout the year.

Submit your application online at www.graduate.ku.edu.

The University of Kansas
Department of Public Administration, Attn: Doctoral Admissions
Wescoe Hall, 1445 Jayhawk Blvd., Room 4060
Lawrence, KS 66045-7594

Degree Requirements and Fields of Study. The Ph.D. program requires a minimum of 66 credit hours of courses, including up to 30 hours earned completing the M.P.A. degree or its equivalent, plus a minimum of 9 hours for the dissertation, for a total of 75 credit hours. (An applicant with a KU M.P.A. may apply 30 hours toward the 75-hour course work requirement.)

All students who enter the Ph.D. program must already have completed the core curriculum (eight courses) for the KU M.P.A. degree or the equivalent at another university, or they must take the appropriate courses after entering the program.
The requirements for the Ph.D. are based on formal course work and independent study in several fields:

- Foundations of public administration
- Specialization field within public administration
- Cognate field
- Methods sequence

**Foundations of Public Administration.** Four of the five courses listed below are required of all doctoral students.

- PUAD 930, PUAD 931, and PUAD 932
- And either PUAD 943 or PUAD 949

Substitutions require the approval of the departmental coordinator of doctoral studies.

**Public Administration Specialization.** In consultation with the coordinator of doctoral studies, each student must develop a public administration specialization of at least three courses. Common specializations include budgeting, public finance, human resources management, public policy analysis and evaluation, public values and ethics, organizations and organization theory, public law and administration, and urban policy/politics and community building. Each has a basic course that is regularly taught in the present graduate curriculum at the 800 level, and it is presumed that at least an additional course would come from independent study. A third course could come from the department or could be taken outside. Potential cooperating units include the Departments of Political Science, Communication Studies, and Economics and the Schools of Education and Business. Additional subfield specializations are available in consultation with faculty.

**Cognate Fields.** The degree requires a cognate field in addition to the public administration specialization. The cognate field is a subfield in economics, political science, education administration, etc., or a policy specialization (environmental policy, transportation policy, etc.) The cognate field’s sequence of three courses requires the approval of the departmental coordinator of doctoral studies and does not require a comprehensive examination.

**Methods.** The doctorate emphasizes the development of research skills. It requires PUAD 934 Research Methods in Public Administration, with the prerequisite PUAD 836 or its equivalent, and PUAD 935 Advanced Quantitative Methods for Public Administration. Students also are encouraged to take PUAD 937 Qualitative Methods in Public Administration. Substitutions require the approval of the departmental coordinator of doctoral studies. The methods requirement satisfies Option 1 of the Foreign Language or Other Research Skills Requirement.

To become a Ph.D. candidate, the student must complete a comprehensive oral examination. No student may attempt the comprehensive oral until he or she has satisfied requirements for the cognate field and passed the preliminary written examination in both the foundations and specialization fields. The doctoral coordinator certifies that the student has met these requirements.

After passing the comprehensive oral examination, the doctoral candidate must write a dissertation approved by a departmental dissertation committee and pass a final oral defense of the dissertation to qualify for the degree. If the aspirant receives a grade of unsatisfactory, the examination may be repeated, but under no circumstances may the student take it more than twice.

**Public Administration Courses**

Courses at the 800 level are primarily designed for M.P.A. students, but Ph.D. students may enroll with consent of the doctoral coordinator. Core M.P.A. courses are marked with an asterisk (*). One course chosen from PUAD 824, PUAD 825, PUAD 826, PUAD 827, or PUAD 828 meets the policy requirement.

**PUAD 601 Crime and Punishment (3).**

**PUAD 602 Diversity in Public Administration (3).**

**PUAD 603 The Nonprofit Sector: Formation, Leadership, and Governance (3).**

**PUAD 639 Concepts of Civil Society (3).**

**PUAD 640 Public Service Leadership Practicum (3).**

**PUAD 641 Public Service Leadership (3).**

**PUAD 693 Directed Readings (1-3).**

**PUAD 694 Topics in Public Administration: ____ (3).**

**PUAD 695 Public Service Leadership Field Research Report (3).**

*PUAD 824 Public Policy and Administration (3). An exploration of the ways in which public policy is made in the United States, focusing on the role of the administrator at each stage of the policy process: formulation, implementation, and evaluation. Various theories of policy-making with application to specific areas of public policy will be examined. LEC

*PUAD 825 Public Policy and Urban Administration (3). An exploration of policy development, implementation, and evaluation in the local government context. Various theories of the policy process and their application to municipal government are examined. (Same as POLS 825.) LEC

*PUAD 826 Public Policy and Administration of State Government (3). An examination of the political and administrative aspects of state government focusing on legislative and executive branches of government. LEC

*PUAD 827 Health Care Policy and Administration (3). A seminar designed to explore the development of public health policy in the United States. Particular attention will be given to (1) the development of public institutions and policy goals; (2) current policy problems such as expenditure-cost controls, prospective reimbursement, utilization review, access, and public and private investment planning; and (3) administrative problems in the current health care system. (Same as HP&M 827.) LEC

*PUAD 828 Nonprofit Management and Policy (3). This course focuses on the economic, social, and legal foundations of the nonprofit sector. Nonprofits are examined in the context of a three-sector economy, with emphasis on the ways in which nonprofits compensate for market failures and government failures. The course examines government-nonprofit relations in the modern welfare and offers an in-depth examination of the health, education, and welfare functions as performed by nonprofits. This course also provides exposure to selected topics in nonprofit management such as grant writing, board relations, advocacy, fundraising, and volunteer management. LEC

**PUAD 830 Administrative Ethics (3).** A survey of ethical issues faced by public administrators. Special attention will be given to ethical problems arising within hierarchical organizations and to the ethical implications of particular public policies. LEC

*PUAD 831 Public Administration Practicum (3). Exposes students to day-to-day operational facets of public management through workshops, speakers, exercises. LEC

**PUAD 832 Organizational Theory (3).** An introductory theory course designed to develop an understanding about organizations, their environments, and the political systems in which they exist. LEC

**PUAD 833 Administrative Behavior (3).** An examination of individual and group behavior within organizations, focusing on motivation, leadership, conflict and conflict resolution, group dynamics and communication. LEC

*PUAD 834 Human Resource Management (3). Explores the way public sector organizations procure, allocate, and develop labor and how the employee-employer relationship is established and maintained. Also emphasizes the relationship between civil service personnel systems and larger political systems. LEC

**PUAD 835 Financing Public Services (3).** This course examines the theories of taxation and non-tax revenues. Basic microeconomic theory is introduced. LEC

*PUAD 836 Introduction to Quantitative Methods (3). Introduces quantitative approaches to examine public management and public policy decisions. Concepts of research design, probability, and inferential statistics are covered. LEC

*PUAD 837 Resource Allocation and Controls (3). Examines the theory, processes, and administration of public budgeting. Emphasizes how political and economic factors shape budgetary processes and outcomes; how budget formats, systems, and management tools affect resource allocation and organization performance; and technical and analytical tools needed to successfully navigate budget processes. LEC

---

**KU’s M.P.A. faculty ranks seventh in the nation for professional publications in the area of public administration, according to a study in Administration and Society.**

The M.P.A. program is available at three locations: Lawrence, the KU Public Management Center in Topeka, and the KU Edwards Campus in Overland Park.
PUAD 838 Urban Service Delivery (3). Focuses on organizational arrangements for the provision of basic urban services and the character of service delivery politics. Methods for evaluating the efficiency and responsiveness of alternative organizational arrangements are treated. LEC

PUAD 839 Topics in Public Administration: (3). Study of selected topics in public administration. LEC

PUAD 840 Theory of Public Administration (3). Survey of the development of ideas about public administration among public officials and research investigators. Emphasis on basic concepts, research reports, and theoretical treatments on the nature of public administration. LEC

*PUAD 841 The Role, Context, and Ethics of Public Administration in American Society (3). Provides students with an overview of the social context of public administration with an emphasis on political issues, political history, and ethics. LEC

*PUAD 842 Law and Public Management (3). Course investigates major concepts that make up the legal administration of public agencies and the accepted uses and procedures of the field, relationships among courts, agencies, the legislature, and basic legal research are examined. LEC

PUAD 843 Constitutional Foundations of Public Administration (3). This course provides a grounding in the premises of public administration including executive, legislative, and judicial powers, and federalism, and those issues associated with the development of economic institutions and processes such as taxation, employment regulation, and commerce controls. LEC

PUAD 844 Advanced Seminar in State and Local Budgeting (3). This course studies the theoretical underpinnings of public budgeting and compares the theories with the actual practice of budgeting in the State of Kansas and its communities. LEC

*PUAD 845 Public Management and Organizational Analysis (3). Explores knowledge of organization theory and behavior to understand and explore organizational dynamics in the public sector. Topics include change, innovation, and organizational culture. LEC

PUAD 846 Kansas and Its Government (3). This course is designed to offer students the opportunity to obtain a comprehensive overview of the culture, history, economy, and geography of Kansas along with the review of state and local government infrastructure. The review of governments will include the financing of governments in Kansas. LEC

PUAD 847 Legislative Process (3). This course is designed to acquaint students with the workings of the policy process at the level of state government. Its focus will give students an understanding of the political process to enable them to function more effectively in state policy development and implementation. Prerequisite: PUAD 824, PUAD 825, PUAD 826 or PUAD 827. LEC

PUAD 848 Advanced Management Practices in State Government (3). This course offers the student opportunities to extend skills developed in PUAD 826 in an experiential learning environment that simulates actual management practice. Complex cases will be ranked ordered and resolved on a work schedule developed by each work group. Groups will work simultaneously on two or more cases at all times. Prerequisite: PUAD 826. LEC

PUAD 849 Law, Courts, and Public Policy (3). This course provides an overview of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, policing, welfare, prisons, and environmental policy. (Same as POLS 849.) Prerequisite: Graduate standing or consent of instructor. LEC

PUAD 850 Intergovernmental Relations (3). This course provides students with an understanding of the theoretical and administrative relationships among the three levels of government—federal, state, and local—in the United States. A number of topics will be examined, including a history of intergovernmental relations, the political, constitutional, and legal foundations of the intergovernmental system, and the constitutional implications of the impact of the intergovernmental system will be assessed from the perspective of specific areas and intergovernmental programs. LEC

PUAD 851 Infra-Structure Management (3). A survey of land-use, infra-structure, and technology issues in municipalities. LEC

PUAD 852 Comparative Public Policy and Administration (3). This seminar examines the application of theories in public administration, public management, and public policy in international and comparative contexts. Particular attention is given to how governments and publics are connected by way of intergovernmental strategies, governance, and differing political and administrative arrangements. LEC

PUAD 853 Policy Analysis and Evaluation (3). This course will examine the fundamental research techniques associated with analyzing alternative solutions to policy problems, as well as evaluating the effectiveness of public programs. Such techniques include the benefit-risk, benefit-cost, and cost-effectiveness analyses, and quasi-experimental and experimental designs. LEC

PUAD 854 Innovation and Organizational Change (3). This course will examine theories of innovation and organizational change as applied to public organizations. Particular emphasis will be placed on the concepts of innovation in bureaucratic organizations, on the process of successful change in organizations, and on leadership and employees roles. LEC

PUAD 855 Financial Management for Public and Not-for-Profit Organizations (3). Financial management is a core component of the decision making and evaluation. This course will rely on fundamental accounting concepts as they relate to the basic financial statements of government and not-for-profit organizations. Time will also be spent on financial management practices (e.g., cash management, auditing, financial reporting, and budgeting) and financial condition, etc. Material presented in this course expands on the foundational material covered in PUAD 837. Prerequisite: PUAD 837 or permission from the instructor. LEC

PUAD 893 Directed Readings (1-3). Designed to meet the needs of advanced students whose study in public administration cannot be met with current course work. RSH

PUAD 894 Professional Development Seminar I (3). Open only to predoctoral students with internships, this intensive seminar is designed around issues of web in their working relationships. Emphasis is placed on the transition of the student to the professional workplace. Class sessions deal with issues like employee socialization, power and trust, and administrative change. Graded on a satisfactory/unsatisfactory basis. FLD

PUAD 895 Professional Development Seminar II (3). Continuation of PUAD 894. Graded on a satisfactory/unsatisfactory basis. FLD

PUAD 896 Field Project Report (1-6). A major independent research project in lieu of a thesis for the MPA degree. Prerequisite: Completion of all other course requirements for the degree. THE

PUAD 930 Research Seminar in Public Administration and Democracy (3). This course focuses on the democratic context of public administration. Topics could include how democracy shapes the practice of public administration; the functioning of public administration in a constitutional democracy; issues relating to control and discretion of public administrators; citizenship and representative bureaucracy; theories of bureaucratic values such as equity, justice and efficiency, ethics and accountability; theories of institutions. SEM

PUAD 931 Research Seminar in Public Management (3). This course, on the topic which increasingly is approached as an interdisciplinary field, focuses on the management of the public and nonprofit sectors. The course covers the nature of public agencies and the roles of public executives, managers, and professionals; distinctions between public, private, and non-profit agencies in America and in other countries; creating and managing networks; leadership; work motivation; and the ethics of decision-making. SEM

PUAD 932 Seminar in the Intellectual History of Public Administration (3). This course will analyze the intellectual currents that undergirded the theories and concepts in public administration. There are three primary perspectives investigating the topic: They are historical, cultural and analytical. SEM

PUAD 934 Research Methods in Public Administration (3). The course examines issues of research and epistemology with an emphasis on connecting theory and research and doing research in field settings. RSH

PUAD 935 Advanced Quantitative Methods for Public Administration (3). This seminar will assist students to develop a thorough competence in both theory and application of multivariate statistical models of the types that are commonly used to study questions of organization and policy in the public sector. These will include for the general linear regression model under a wide variety of specifications, as well as a consideration of path models and systems of simultaneous equations. The principal goal of this course is to strengthen the ability of doctoral students in public administration to work methodologically as independent scholars using relatively advanced designs and technique in their work. SEM

PUAD 936 Policy Analysis and Program Evaluation (3). This course examines the theoretical foundations and analytical components of policy analysis and program evaluation, common tools for assessing alternative courses of public action and program effectiveness. This examination will include a review and critique of common quantitative and qualitative approaches, including cost-benefit analysis, cost-effectiveness analysis, and quasi-experimental design. LEC

PUAD 937 Qualitative Methods in Public Administration (3). This course examines the qualitative research approaches and techniques used in their empirical research. The course will focus on the field research and the collection of “textual data” through observation, interviewing, and documents. The course will also examine the interpretation and analysis of qualitative data and how to present qualitative findings. RSH

PUAD 939 Topics in Public Administration (1-3). A study of a select topics in public administration. Course may be taken more than once. LEC

PUAD 943 Constitutional Foundations of Public Administration (3). This course provides grounding in the constitutional premises of public administration including executive, legislative, and judicial powers, and those issues associated with the development of economic institutions and processes such as taxation, employment regulation, and commerce controls. LEC

PUAD 949 Law, Courts, and Public Policy (3). This course provides an in-depth analysis of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, policing, welfare, prisons, and environmental policy. Part of the course requirements, students will conduct original empirical research. LEC

PUAD 990 Research Practicum in Public Policy and Administration (3). This course will provide students with an opportunity to conduct applied research in a field setting with faculty guidance. May be pursued as an independent study or as a regularly scheduled class with a group of students. Prerequisite: PUAD 934 and PUAD 935. RSH

PUAD 998 Directed Reading on Public Administration (1-6). Designed to meet the needs of graduate students whose study in public administration cannot be met with current course work. RSH

PUAD 999 Dissertation (1-15). Enrollment for writing doctoral dissertations. THE
Religious Studies

Chair: Daniel Stevenson
Graduate Adviser: William Lindsey
Smith Hall, 1300 Oread Ave., Room 109A
Lawrence, KS 66045-7603, www2.ku.edu/~rstudies, (785) 864-4663
Professors: Miller, Minor
Professor Emeritus: Breslauer
Associate Professors: Mirecki, Shelton, Stevenson
Associate Professor Emeritus: Macauley
Assistant Professors: Dolgopolksi, Lindsey, Zogry
Lecturers: Beeson, Heller, Klaus, Nanos, Wright, Zimdars-Swartz

The academic study of religion acquaints the student with religion as a central phenomenon of human experience; examines the forms in which religious experience has been described, organized, and practiced in history and in varying cultures; analyzes the interaction of religion with cultural institutions and personal and group experience; focuses on religion as an expression of meanings and values in the context of what is perceived as ultimate; and introduces the student to the methods appropriate to the objective study of religion.

The department offers a graduate program leading to the M.A. with a major in religious studies. The program enables students to pursue specialized advanced work that builds on previous general background in religious studies. At all levels, interdepartmental and interdisciplinary cooperation is encouraged as important to a comprehensive program. Continuing research in religious studies is an indispensable and foundational element, intimately related both to teaching and to the wider exchange and advancement of knowledge.

A library of some 14,000 volumes, owned by the Friends of the Department of Religious Studies at the University of Kansas, is housed with and used by the department in Irma I. Smith Hall.

Admission

An applicant is expected to have taken at least four undergraduate courses in religious studies, of which one must be in biblical studies, one in the history of religious institutions and movements, and one in religious thought. At least one of the four courses must be in a religion not associated with the Hebrew Bible. Students with undergraduate deficiencies must take course work to make them up at the rate of at least two courses a semester, passing each with a grade of B or higher, until the requirement has been fulfilled. Such course work does not count toward the total hours required for the M.A.

The department does not require Graduate Record Examination scores for admission or awards if the applicant’s undergraduate grade-point average is 3.0 or higher on a 4.0 scale. It does urge all applicants to take the appropriate sections of the GRE. An applicant whose undergraduate grade-point average is below 3.0 must submit official results of the GRE aptitude test to complete his or her applications. Those applying for university awards and funding must submit official results of the GRE aptitude test.

Submit your application online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to and all other requested application materials to

The University of Kansas
Department of Religious Studies
Smith Hall, 1300 Oread Ave., Room 109A
Lawrence, KS 66045-7603

Competence

Competence represents an ability to command a broad general knowledge of a field in religious studies. Students are expected to have a wide understanding of the basic facts, methodological issues, and history of research in the competence area. Students may wish to focus more narrowly on some aspect of that area for the thesis project or for later research. The department permits students to be examined for competence in one of the following areas:

- Indigenous religions
- Islamic studies
- Jewish studies
- Religion in the Ancient Near East and Mediterranean
- Religion in Asia
- Religion in the U.S.A.
- Religious ethics
- Theories and methods of studying religion

M.A. Degree Requirements

M.A. Thesis Degree Requirements. The thesis program in religious studies leads toward the M.A. and consists of three interrelated but distinct elements.

1. A candidate for this degree must complete 30 graduate credit hours with the following stipulations:

   a. At least 18 credit hours must be in courses in religious studies and the rest in fields related to a declared competence.

   b. Course work must include at least 12 hours (four courses) in the declared competence.

   c. Immediately upon completion of 12 hours of course work, a student must, in consultation with an adviser, declare a competence in which an examination eventually will be taken. The student and the adviser must determine whether the student is pursuing a thesis or a nonthesis option. The student and the adviser plan the remaining course work with the declared competence in mind and propose a program and supervisory committee to the committee on graduate studies for approval. At this point, the supervisory committee determines the need for special competence in languages or research skills appropriate for the declared competence. If the student wishes to declare a new competence, the change may be permitted but is likely to require additional courses relevant to the new area and additional linguistic or research skills.

   d. Each student must complete REL 601 Approaches to the Study of Religion the first year in the program.

   e. Each student must complete REL 780 Seminar in Theories of Religious Experience or REL 781 Seminar in Theories of Religion. The student should complete the prerequisite 12 hours of undergraduate courses in religious studies before taking REL 601, REL 780, or REL 781.

   f. Each student must complete one course from each of these groups:

   A. Western Religious Traditions
      REL 512 Prophecy, Poetry, and Story in the Hebrew Bible (Old Testament)
      REL 515 Studies in Early Christian Literature and History
      REL 525 Jews and Christians in Greco-Roman Antiquity
      REL 526 Jewish History and Literature in the Greek and Roman Periods
      REL 530 Christian Origins: From the Beginnings to Augustine
      REL 531 Studies in Christianity
      REL 532 Studies in Islam
      REL 535/AAAS 542 The History of Islam in Africa
      REL 539 Greek and Roman Religion
      REL 570 Studies in Judaism
      REL 732 Seminar in Western Religious Texts: _____

The 10-foot-tall, bronze-filigreed sculpture “Moses” stands before Smith Hall.

The academic study of religion acquaints the student with religion as a central phenomenon of human experience.

Twenty-five KU students have become Rhodes Scholars since the program began.
non-examined credit hours with the following stipulations:

(3). This course examines

REL 762 Seminar in Eastern Religious Thought: _____
REL 776 Seminar in Religion and Society in Asia: ______

Nonthesis Program Degree Requirements. The nonthesis graduate program in religious studies leads toward the M.A. and consists of two interrelated but distinct elements.

1. A candidate for this degree must complete 33 graduate credit hours with the following stipulations:
   (a) At least 21 of the 33 graduate hours must be in courses in religious studies and the rest in fields related to a declared competence.
   (b, c, d, e, f, g) (Same as thesis option, above).

2. The student must pass a comprehensive oral and written examination over the declared competence, based on a bibliography generated by the student, adviser, and supervisory committee. The bibliography must list about 20 to 25 books in addition to appropriate articles. Two-thirds of the bibliography should be relevant to the area generally, and one-third should reflect the student’s special interests within that area.

3. Each student must write and successfully defend a thesis that meets minimum department and general requirements. As many as 3 hours in REL 899 Thesis may be included in the 30-hour program. The thesis project includes a prospectus for a thesis to the supervisory committee, approval of which can be granted only after the examination is passed.

Transfer of Credit

Transfer of graduate credit is allowed, including study abroad course credit, from other accredited institutions, up to a total of 6 semester hours. (See Credit by Transfer under General Regulations in the General Information chapter of this catalog.) Bachelor’s degree graduates from KU are permitted to transfer 8 hours. The hours may be used only when the M.A. is completed within six years of the time the credit was given. Application for transfer must be made by the student and the adviser to the committee on graduate studies. Normally, such applications are not made until after 12 hours of KU course work have been completed. If the committee approves, applications are forwarded for approval.

Jewish Studies Courses
JWSH 572 Jewish Folklore (3). HL
JWSH 600 Advanced Topics in Jewish Studies: ____ (3).

REES courses are taught by faculty members in many areas of the university.

The Center for Russian, East European, and Eurasian Studies is one of the nation’s 16 comprehensive Title VI National Resource Centers for the study of Russia, Ukraine, East Central Europe, and the Balkans.
May be taken more than once if subject matter varies sufficiently. (Same as EALC 722.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

REL 771 Seminar in Religious Movements and Social Change: _____ (3). Relationship of religious groups to movements for social change: influence of religious groups on social change, and the impact of efforts toward social change in religious groups. Prerequisite: REL 171, REL 371, REL 377, or equivalent. LEC

REL 772 Seminar in Religion and Modern Social Criticism: _____ (3). Seminar focusing on religious issues in some important texts of modern social criticism from the French Revolution to the present day. Prerequisite: An introductory course in religion. LEC

REL 773 Seminar in Religion and National Identity: _____ (3). Analysis of selected issues wherein religion and the formation and definition of a selected nation or nations intersect. LEC

REL 775 Seminar in Religion and Society in the West: _____ (3). Analysis of selected Western religions and their relationships to selected Western societies. May be taken more than once if subject matter varies sufficiently. Prerequisite: REL 512, REL 515, REL 526, REL 530, REL 532, REL 539, or REL 570 or permission of instructor. LEC

REL 776 Seminar in Religion and Society in Asia: _____ (3). Analysis of selected Asian religions and their relationships to selected Asian societies. May be taken more than once if subject matter varies sufficiently. (Same as EALC 776.) Prerequisite: REL 507, REL 508, REL 509, or permission of instructor. LEC

REL 777 Seminar in Religion and Gender (3). Examination of symbols, images, scriptures, rites, teachings and scholarship regarding gender definitions and performance in various religious traditions. LEC

REL 780 Seminar in Theories of Religious Experience (3). Seminar exploring sociological, psychological, anthropological, and other theories regarding religious experience. Prerequisite: Permission of instructor. LEC

REL 781 Seminar in Theories of Religion (3). A study of selected theorists concerned with the nature of religion conducted by methodological analysis of the theories, data, and conclusions. LEC

REL 787 Seminar in Ethical Issues in Health Care: _____ (3). Interdisciplinary seminar, drawing on the literature of social, medical, and professional ethics, with special attention to religious perspectives on meanings of health and the delivery of health care. Of particular interest to health-related professions. Prerequisite: Permission of instructor. LEC

REL 800 Readings (1-4). RSH

REL 839 Topics in the History and Literature of Religion: _____ (3). Selected studies, as announced in Schedule of Classes, in the history and religious literature of Judaism, Christianity, religion in America, Islam, and Asian religions. Course may be taken more than once if the subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC

REL 864 Topics in Religious Thought and Symbol: _____ (3). Selected studies, as announced in Schedule of Classes, in Asian, Middle Eastern, and Western religious thought, mysticism, and religious ethics. Course may be taken more than once if subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC

REL 875 Topics in Religion and Society: _____ (3). Special topics to be announced in Schedule of Classes, according to research interests of faculty and students. A particular aspect of the study of religion and culture will be emphasized. Course may be taken more than once if the subject matter varies. Prerequisite: Permission of instructor. LEC

REL 877 Topics in Women and Religion: _____ (3). Selected studies, as announced in Schedule of Classes, in the history and analysis of symbols, images, scriptures, rites, and teachings defining women’s roles in various religious traditions. Course may be taken more than once if the subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC

REL 899 Thesis (1-3). THE

**Russian, East European, and Eurasian Studies**

Chair: Edith W. Clowes, crees@ku.edu

Bailey Hall, 1440 Jayhawk Blvd., Room 320

Lawrence, KS 66045-7545, www.crees.ku.edu, (785) 864-4236

Graduate Adviser: Eve Levin, 320F Bailey Hall, (785) 864-4236

Professors: Carlson, Clowes, Crawford, DeGeorge, El-Hodiri, Francisco, Gottlieb, Greenberg, Houston, Lesnikowski, Levin, Mikkelsen, Parker, Rankin, Staniunas, Wilson

Professors Emeriti: Alexander, Cienciala, Dardess, Dienes, Greaves, Maurer, Piekalkiewicz, Svil, Stokstad

Associate Professors: Basow, Christilles, Comer, Dickey, Earnhart, Hanley, Herron, Najafizadeh, O’Lear, Phipps, Volek

Assistant Professors: Andac, Dolgopolski, Dwyer, Hilsdale, Ivanov, L’Heureux, Najafizadeh, Omelicheva, Perelmutter, Radovanovic, Sabag, A. Tsiovkh, Y. Tsiovkh, Vassileva-Karagyozova, Wood

Librarians: Guillian, Haines, Husic, Rosenblum

**Admission**

Most applicants hold B.A. degrees in the social sciences or humanities with grade-point averages of 3.0 or higher. Students with B.S. or professional degrees are also eligible to apply. Some students may consider completing the M.A. degree in conjunction with academic or professional study in another department or school.

Students should submit the following application materials:

- Application for admission, sent to the Graduate Application Processing Center of the University of Kansas.
- A nonrefundable application fee (payable to the University of Kansas; see Admission in the General Information chapter of this catalog).
- One original transcript of all college-level work.
- Graduate Record Examination scores. International students should also submit Test of English as a Foreign Language scores.
- Three letters of recommendation commenting on the student’s ability to succeed at graduate work. These letters should be accompanied by a signed waiver form, indicating whether the applicant has waived his or her rights to see the letter.
- A two-page statement of the student’s educational and professional objectives.

Applications to begin the M.A. program should be submitted by January 1 for admission for the following fall semester. Applications may be accepted off-cycle; please consult with the graduate adviser.

Submit your application at www.graduate.ku.edu.

Send all other requested application materials to

The University of Kansas

Russian, East European, and Eurasian Studies

Bailey Hall, 1440 Jayhawk Blvd., Room 320

Lawrence, KS 66045-7545

**M.A. Degree Requirements**

A Master of Arts degree is awarded in three tracks: Russian, East European, and Ukrainian.

Requirements for the degree:

1. One course of advanced language (in addition to the 22 hours or equivalent required below).

2. Three courses for a total of 9 credit hours in the department or subject area of the student’s special interest.

3. One area course in each of the other four groupings below, for a total of 12 hours.

4. REES 898 and REES 899. REES 898 focuses on research methodologies, resources, and issues. REES 899 is a seminar in which students will research, write, and present an original formal paper on a topic developed in consultation with the faculty, extensively using sources in the target area language. Before enrolling in REES 899, students must have completed a total of 22 semester credit hours (three years), or the equivalent, of the target language.

**Course Groupings**

I. Literature and the Arts

II. History

III. Political Science

IV. Philosophy and Religion

V. Economics, Business, and Geography

Every graduate degree candidate must pass a comprehensive examination, in addition to the regular course examinations, by the final date for meeting general degree requirements.

Information about opportunities and requirements for graduate work with a Russian or East European concentration in any department at KU may be obtained from the department.

Requirements may be modified in special cases with the director’s approval, particularly for students with special needs such as Experienced Teacher Fellows, Foreign Area Officers, or candidates for degrees in the professional schools. All students are encouraged to study abroad.
Russian, East European, and Eurasian Studies Courses

REES 510 Understanding Central Asia (3). NW

REES 704 Russian Orthodoxy in Historical Perspective (3). This course examines Russian Orthodoxy as a religious system and the institution of the Russian Orthodox Church from its first appearance in Russia to the present. It focuses on beliefs and practices of the clergy and laity; institutional structures; the relationships between Church and State; interactions with non-Orthodox religious communities; responses to Soviet atheist policies; Orthodox influences on political theory, philosophy, literature, and the fine arts. (Same as REL 704.) LEC

REES 799 Directed Readings in Russian and East European Studies (1-5). RSH

REES 895 Special Problems in Area Studies: _____

REES 799 Directed Readings in Russian and East European Studies (1-5). RSH

REES 897 Research (1). Enrollment to fulfill Master’s continuous enrollment rule. Prerequisite: Completion of all degree requirements except submission of seminar paper or comprehensive examination. RSH

REES 898 Seminar in Russian and East European Studies (3). Mastery of interdisciplinary research skills, and knowledge of resources and scholarship on the study of Russian, East European, and Eurasian Studies. LEC

REES 899 Capstone Research Seminar in Russian, East European, and Eurasian Studies (3). Research, write, and present a professional-quality paper, involving interdisciplinary original research, consultation with REES faculty, and substantial use of sources in at least one REES language. Prerequisite: REES 898. SEM

Serbian

See Slavic Languages and Literatures.

Slavic Languages and Literatures

Chair: Marc L. Greenberg, mlg@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 2134
Lawrence, KS 66045-7594, www2.ku.edu/~slavic, (785) 864-3313
Director of Graduate Studies: Maria Carlson, mcarlson@ku.edu
Professors: Carlson, Clowes, Greenberg, Parker
Professor Emerita: Maurer
Associate Professors: Comer, Dickey
Assistant Professors: Perlmuter, Sabbag, Vassileva-Karagyozova
Courtesy Faculty: Levin, Mikkelsen

The department offers programs leading to Master of Arts and Doctor of Philosophy degrees in Slavic languages and literatures. Two concentrations are available in the Ph.D. program: Russian literature and Slavic linguistics.

Admission

Submit your application online at www.graduate.ku.edu. Send all other requested application materials to
The University of Kansas
Department of Slavic Languages and Literatures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2133
Lawrence, KS 66045-7594

M.A. Degree Requirements

M.A. in Slavic Languages and Literatures. Prerequisites for Admission: 30 semester hours of credit in an appropriate Slavic language and literature (of which 12 hours must have been taken on the junior/senior level), or the equivalent of such study.

Nonthesis Degree
1. At least 30 hours of graduate work in Slavic languages and literatures including SLAV 710 and SLAV 740, three courses in Slavic literature, three courses in Slavic linguistics, and two courses in either Slavic literature or linguistics. At least one of the literature or linguistics courses must be a graduate seminar.
2. A written and oral examination.

Thesis Degree
1. At least 24 hours of graduate work in Slavic languages and literatures, including SLAV 710 and SLAV 740, three courses in Slavic literature, and three courses in Slavic linguistics.
2. A thesis for which 6 credit hours may be allowed (not to be included in the 24 hour minimum).
3. A written and oral examination.

For students who plan to continue in the graduate program, the M.A. written and oral examination serves as a qualifying examination for advancement to Ph.D. work. For students who seek only the M.A. degree, successful completion of the M.A. written and oral examination signals the end of their program.

Students planning to work toward the Ph.D. may begin study of a second Slavic language during their M.A. work. Such study does not count toward M.A. degree requirements.

Students completing the M.A. degree without intent to continue to Ph.D. work have the opportunity, in consultation with the graduate adviser, to adjust their program to meet specific career goals.

Ph.D. Degree Requirements

Students admitted to Ph.D. work in Russian literature or Slavic linguistics must fulfill M.A. requirements and pass the qualifying examination. Students also must fulfill all specific requirements in the concentration, meet the Foreign Language or Other Research Skills (FLORS) requirement, complete comprehensive examinations, and write a dissertation.

All Ph.D. students are expected to enroll in courses in their concentrations numbered 500 and above offered in a given semester (1) if they have not previously had the courses or their equivalent, (2) if it is judged that the course material aids in preparation for comprehensive examinations, and (3) if it is feasible to incorporate such courses into a given semester’s program.

Requirements for Ph.D. Concentration in Russian Literature
• Detailed knowledge of the history and development of Russian literature
• Oral and written competence in Russian language plus an orientation in its structure and history
• Reading competence in at least one West or South Slavic language and a general knowledge of the history of its literature
• Nine to 12 graduate semester credit hours in a minor subject either from outside or inside the department
• An acceptable dissertation

Requirements for Ph.D. Concentration in Slavic Linguistics
• Detailed knowledge of the structure and history of two Slavic languages, one of which is considered the student’s major language, plus reading competence in a third Slavic language
• Oral and written competence in the major Slavic language
• Nine to 12 graduate semester credit hours in a minor subject, either from outside or inside the department
• Basic knowledge of general and comparative linguistics
• An acceptable dissertation

Language and area studies in Russian, Bosnian/Croatian/Serbian, and Polish are available.

The holdings of Slavica in the University of Kansas library total more than 400,000 volumes in both Slavic and non-Slavic languages.
Examinations. Qualifying Examination: All students must take the qualifying examination to be admitted to Ph.D. work. For KU students, the M.A. examination serves as the qualifying examination. Students who hold the M.A. degree from another institution but begin Ph.D. work at KU are required to take the qualifying examination within two semesters of entry into the program.

FLORS Requirement: Before receiving permission to attempt the Ph.D. comprehensive examination, the student must demonstrate (through course work or examination) reading competence in a Western European language, preferably French or German.

Comprehensive Examination: Students may take written and oral comprehensive examinations after fulfilling all other requirements for the Ph.D., with the exception of the dissertation.

Dissertation Defense: Students demonstrate satisfactory completion of the Ph.D. program in their final oral defense of the dissertation and its field and by prompt submission of the thesis.

Slavic Language Programs in Russia and Eastern Europe

KU conducts a six-week summer language program in Russia. Students may take intermediate or advanced Bosnian/Croatian/Serbian at a six-week summer institute in Croatia or attend a summer language program in Poland. Graduate students at KU are encouraged to spend a summer, semester, and/or year in a summer language program in Poland. Graduate students at KU conduct a six-week summer language program in Russia.

Students may take intermediate or advanced Bosnian/Croatian/Serbian courses.

Bosnian/Croatian/Serbian Courses
BCRS 504 Advanced Bosnian/Croatian/Serbian I (3).
BCRS 508 Advanced Bosnian/Croatian/Serbian II (3).
BCRS 675 Readings in Bosnian/Croatian/Serbian (1-6).

Czech Course
CZCH 675 Readings in Czech (1-6).

Polish Courses
PLSH 504 Advanced Polish I (3).
PLSH 508 Advanced Polish II (3).
PLSH 675 Readings in Polish Language and Literature (1-6).

Russian Courses
RUSS 504 Advanced Russian I (3).
RUSS 508 Advanced Russian II (3).
RUSS 512 Russian for the Professions I (3).
RUSS 516 Russian for the Professions II (3).
RUSS 522 Problems in Translating Russian into English I (3).
RUSS 526 Problems in Translating Russian into English II (3).
RUSS 550 Advanced Conversation, Composition, and Grammar in Russian: Summer Program (6).
RUSS 552 Advanced Russian Language at Saint Petersburg University: Semester Program (14).
RUSS 600 Classics of Russian Culture (3).
RUSS 604 Contemporary Russian Culture (3).
RUSS 608 Russian Phonetics and Grammar (3).
RUSS 612 Introduction to Russian Literature (3).
RUSS 616 Stylistics (3).
RUSS 675 Readings in Russian (1-6).

Slavic Languages and Literatures Courses
SLAV 500 Russia Today (3).
SLAV 502 Introduction to Russian Culture and Society: _____ (3).
SLAV 503 Post-Soviet Communication (3).
SLAV 504 Introduction to East-Central European Culture and Society: _____ (3).
SLAV 505 Introduction to Czech Culture (3).
SLAV 506 West Slavic Literature and Civilization (Polish and Czech) (3).
SLAV 508 South Slavic Literature and Civilization (3). NW
SLAV 510 The Russian Literary Genius (3).
SLAV 512 Siberia Yesterday and Today (3). NW
SLAV 514 Totalitarianism and Literature in Central Europe (3).
SLAV 515 Film Adaptations of Polish and Czech Literature (3).
SLAV 520 Russian Phonetics, Phonology, and Inflectional Morphology (3).
SLAV 522 Russian Derivational Morphology, Syntax, and Lexicology (3).
SLAV 524 Russian Since the Revolution (3).
SLAV 528 Comparative Study of Slavic Literatures (3).
SLAV 530 Introduction to Russian Poetry (3).
SLAV 532 Dostoevsky (3).
SLAV 534 Tolstoy (3).
SLAV 536 Turgenev (3).
SLAV 538 The Modern Polish Short Story (3).
SLAV 540 Language and Identity in East-Central Europe and the Former Soviet Union (3).
SLAV 558 Readings in Slovene (1-6).
SLAV 560 Introduction to Slavic Language: _____ (3).
SLAV 561 Readings in Slavic Language: _____ (1-6).
SLAV 562 Russian Theatre and Drama from Stanislavski and Chekhov to the Present (3).
SLAV 564 The “Woman Question” in Nineteenth-Century Russian Literature (3).
SLAV 566 The Devil in Russian Literature (3).
SLAV 568 Biblical Themes in Modern Russian Literature (3).
SLAV 600 Biography of a City: _____ (3).
SLAV 612 Introduction to Russian Literature of the 19th Century (3).
SLAV 614 Russian Literature in Translation: _____ (3).
SLAV 616 Introduction to Russian Literature of the 20th Century (3).
SLAV 630 Slavic Folklore (3).
SLAV 635 Language, Culture, and Ethnicity in Prehistoric Eastern Europe (3).
SLAV 642 Pushkin and Evgeny Onegin (3).
SLAV 650 The Russian Short Story (3).
SLAV 656 Russian Literature of the 18th Century (3).
SLAV 660 Nineteenth-Century Russian Prose and Fiction (3).
SLAV 662 Russian Literary Modernism: 1880-1930 (3).
SLAV 667 Post-Soviet Literature (3).
SLAV 668 Nabokov (3).
SLAV 678 Readings in Slavic Linguistics (1-6).
SLAV 679 Topics in: _____ (1-6).
SLAV 684 Main Currents of Russian Thought I (3).
SLAV 686 Main Currents of Russian Thought II (3).
SLAV 710 Introduction to Slavic Languages and Linguistics (3). The Slavic languages and peoples, including briefly: their origin, prehistory, and early culture. Basic linguistic methodology as applied to Slavic material from the beginnings of Slavic linguistic completeness to the present. LEC
SLAV 711 Russian Poetry: Nineteenth Century (3). Readings from the works of the major poets, in Russian. Prerequisite: Three years of Russian language study or the equivalent. LEC
SLAV 712 Russian Poetry: Twentieth Century (3). Readings from the works of the major poets, in Russian. Prerequisite: Language proficiency. LEC
SLAV 714 Russian Theatre and Drama to 1900 (3). A study of the development of Russian theatre and dramatic literature from its beginnings to 1900. Readings in English. Students with knowledge of Russian will read some works in Russian. LEC
SLAV 715 Russian Drama and Theatre 1953 to the Present (3). A study of the development of Russian theatre and dramatic literature from 1953 to the present. Readings in English. Students with knowledge of Russian will read some works in Russian. LEC
SLAV 716 History of Russian Literary Criticism: Late 18th and 19th Century (3). A study of the various literary periods, such as sentimentalism, romanticism, naturalism, realism, with particular reference to individual literary critics and critical journals. LEC
SLAV 719 Philosophical and Aesthetic Thought of the Russian Silver Age (3). A survey of the works of Solovyov, Florensky, Berdyaev, Merezhkovsky, Ivanov, and others, and their relation to the literature and culture of the Silver Age. LEC
SLAV 721 Pushkin (3). A study of the life and works of Alexander Pushkin. Readings in Russian, open to senior Russian majors and graduate students. Prerequisite: Three years of Russian or the equivalent. LEC
SLAV 726 Chekhov (3). A study of the life and works of Anton Chekhov. Open to senior Russian majors and graduate students. Prerequisite: Three years of Russian or the equivalent. LEC
SLAV 727 Bely and Blok (3). A study of the life and works of the Symbolist writers, Andrei Bely and Aleksandr Blok. Readings in Russian. LEC
SLAV 728 Nineteenth-Century Russian Prose (3). Readings from the works of Turgeniev, Chekhov, Leskov, Saltykov, and others. Readings and discussion in English. Russian majors will be expected to read some works in Russian. No prerequisite. LEC
SLAV 730 Russian Emigre Literature (3). A study of representative works in all genres, by Russian émigré writers. Readings in English, LEC
SLAV 740 Bibliography and Methods (3). An introduction to the technical problems of literary and philosophical research in the field of Russian studies. LEC
SLAV 748 Old Church Slavic (3). A course in the first written language of the Slavs (?9th centuries AD), with discussion of Indo-European, Baltic and Common Slavic background. Prerequisite: Two years of Russian or the study of another ancient Indo-European language. LEC
SLAV 750 Introduction to Russian Historical Grammar (3). The linguistic history of Russian from the emergence of East Slavic dialects of Common Slavic to the
modern period, with emphasis on fundamental structural changes and the intro-
duction of new vocabulary necessary for the reading and analysis of Old and Middle Russian
texts. Prerequisite: Three years of Russian or the equivalent. LEC

SLAV 752 Old Russian Grammar and Texts (3). An examination of the Russian lan-
guage from its beginnings to the 17th century through close reading of Old and Middle Russian
texts. Reading and discussion of the literature and use of Russian historical linguistics. Prerequisite: SLAV 748, SLAV 750, or equivalent. LEC

SLAV 756 Structure of Russian Language (3). Synchronous study of the contemporary
Russian language with special emphasis on problems of functional morphology and
syntax. Prerequisite: Three years of Russian or the equivalent. LEC

SLAV 799 M.A. Seminar in Slavic Linguistics (3). Topics in Slavic linguistics. Con-
tent will vary. May be repeated. LEC

SLAV 802 Thesis (1-6). THE

SLAV 804 Comparative Slavic Linguistics (3). An examination of the development of the Slavic languages from the Common Slavic period to the present, proceeding from Indo-European. Prerequisite: Graduate standing in Russian. LEC

SLAV 806 East Slavic Linguistics (3). An examination of the linguistic phenomena and
historical development of the East Slavic languages (Russian, Belorussian, and Ukrainian). Prerequisite: Graduate standing in Russian. LEC

SLAV 808 West Slavic Linguistics (3). An examination of linguistic phenomena and
historical development of the West Slavic languages (Polish, Czech, Slovak, and Upper and Lower Sorbian). LEC

SLAV 810 South Slavic Linguistics (3). An examination of linguistic phenomena and
historical development of Bulgarian, Macedonian, Croatian-Serbian, Slovene. LEC

SLAV 820 Old Russian Literature: Beginnings to 1700 (3). Readings of selected
texts in Russian. Prerequisite: SLAV 752. LEC

SLAV 822 Seminar in Russian Literature: Eighteenth Century (3). An investigation of
specific themes or authors in the literature, culture, and thought of the 18th century. All read-
ing in Russian. Prerequisite: Graduate standing and advanced Russian language. SEM

SLAV 824 Proseminar in Methods of Teaching Slavic Languages I (1-3). Required for
all teaching assistants, assistant instructors engaged in the teaching of Slavic languages and
persons planning for careers in teaching Slavic languages. Combines discussion of
theoretical teaching concepts with practical solution of problems arising concurrently in
Slavic language courses. Students enrolled for two or three hours will study advanced
Slavic grammar topics and stylistics as they apply to the teaching of Slavic languages. LEC

SLAV 825 Investigation and Conference (1-3). Individual work in language or lit-
erature of the teaching of Slavic languages by qualified students under direction
of members of the department. RHS

SLAV 826 Proseminar in Methods of Teaching Slavic Languages II (1-3). Required for
all teaching assistants, assistant instructors engaged in the teaching of Slavic languages and
persons planning for careers in teaching Slavic languages. Combines discussion of theo-
retical teaching concepts with practical solution of problems arising currently in Slavic
language courses. Students enrolled for two or three hours will study advanced
Slavic grammar topics and stylistics as they apply to the teaching of Slavic languages. LEC

SLAV 850 Seminar in Russian Literature: Nineteenth Century: (3). A regular
seminar for graduate students, devoted to special problems in Russian literature.
(Ancient Russian literature, Classicism, Romanticism, Realism, Symbolism, etc.) Designed to introduce the student to the more advanced methods in criti-
cism, literary analysis, and research. Prerequisite: Graduate standing in Slavic
Languages and Literatures or permission of instructor. LEC

SLAV 852 Seminar in Russian Literature: Twentieth Century (3). Various topics in-
cluding pre- and post-Revolutionary poetry, the prose of the 1920s, the develop-
ment of Socialist Realism, individual authors, etc. LEC

SLAV 899 Ph.D. Seminar, Slavic Linguistics (3). Topics in Slavic linguistics. Con-
tent will vary. May be repeated. Prerequisite: Ph.D. student in Slavic Languages and
Literatures. LEC

SLAV 912 Seminar: Topics in Contemporary Slavic Linguistics (3). Synchronous
examination of specific topics, i.e., phonology, morphology, syntax, and lexicology
of several Slavic languages. LEC

SLAV 914 Seminar: Topics in Historical Slavic Linguistics (3). Diachronic exami-
nation of selected topics, i.e., phonology, morphology, syntax, or lexicology, of one or
more Slavic languages. LEC

SLAV 917 Seminar in Russian Culture and Society (3). Examination of selected topics in
Russian cultural history, especially as treated in the works of Russian literature and intel-
lectual history. Prerequisite: At least one course in Russian history, or one of the following
courses—SLAV 502, SLAV 510, SLAV 684, SLAV 686, plus graduate standing. LEC

SLAV 932 Seminar: Topics in Slavic Folklore (3). Investigation and concentrated
study of one or more themes (e.g., mythology, demonology, life rituals, folklore and
literature), figures (e.g., Baba Yaga), or genres (e.g., magic tales, byliny, rid-
dles) of Slavic folklore. All readings in Russian. Prerequisite: SLAV 630. SEM

SLAV 940 Seminar: Topics in Comparative Slavic Linguistics (3). Prerequisite:
Graduate standing in Slavic Languages and Literatures. LEC

SLAV 999 Dissertation (1-6). THE

- Turkish Course
  TURK 675 Readings in Turkish: (3).

- Ukrainian Courses
  UKRA 512 Intensive Ukrainian I (5).
  UKRA 516 Intensive Ukrainian II (5).
  UKRA 675 Readings in Ukrainian Language (1-6).

---

**Sociology**

Chair: William G. Staples, socdept@ku.edu
Graduate Adviser: Eric Hanley
Fraser Hall, 1415 Jayhawk Blvd., Room 716
Lawrence, KS 66045-7540

www.sociology.ku.edu, (785) 864-4111, fax: (785) 864-5280

Professors: Antonio, Ekerdt, Hill, Nagel, Smith, Sprague, Staples, Zimmerman

Associate Professors: Albrecht, Hanley, Mennerick, Najafizadeh
Adjunct Associate Professor: Rosenthal

Assistant Professors: Andaç, Chong, Donovan, Golash-Boza, Kleykamp, LaPierre, Obadare, Weller

The department offers a full graduate program in sociology leading to the M.A. and Ph.D. degrees, educating sociologists for careers in teaching and research and for fields of practical application. It also contributes to professional education in such fields as social welfare, social policy, architecture, education, journalism, personnel administration, business, and medicine.

Aside from professional interests, the department offers instruction to assist students in deepening their understanding of social relations and, hence, of the social context of their own lives.

**Admission**

Prerequisites are 15 credit hours in sociology, a course in sociological theory, and a sociology course in statistics. Applications must include scores on the Graduate Record Examination aptitude tests. International applicants must submit scores on the GRE and either the Test of English as a Foreign Language or the academic format of the International English Language Testing System administered by the University of Cambridge ESOL Ex-
aminations. Applications also must include a statement of aca-
demic interests and professional goals, three recommendation
ing ratings forms and letters from individuals who can evaluate the applicant’s academic performance, one complete set of trans-
scripts from all colleges and universities attended, a current ré-
sumé/cvite, a writing sample, and a nonrefundable application fee (see Admission in the General Information chapter of this catalog). The applicant’s record should indicate considerable academic promise and a high level of motivation.

Submit your application online at www.graduate.ku.edu. Send transcripts of all completed university course work and all other requested application materials to

The University of Kansas
Department of Sociology
Fraser Hall, 1415 Jayhawk Blvd., Room 716
Lawrence, KS 66045-7540

**M.A. Degree Requirements**

**Thesis Option.** Students must complete 30 hours of graduate credit (including SOC 790 M.A. Proseminar, SOC 811 Sociological Research, one course in sociological theory, one additional course in either sociological theory or research methods, and at least 6 hours of thesis) and must prepare and defend an M.A. thesis. The defense includes a general examination of sociological theory and research. Completion of these requirements leads to the M.A. degree, which normally allows the student to proceed to doctoral study.

**Nonthesis—Research Paper Option.** Students must complete 33 hours of graduate credit (excluding any credit for thesis and in-
ccluding the courses above under thesis option) and must pre-
pare and receive approval of a research paper, not to exceed 40
pages, to be submitted for presentation at a scholarly meeting or for publication in a scholarly journal. Completion of these
requirements leads to the M.A. degree, which normally allows
the student to proceed to doctoral study.
Nonthesis—Course Work Option. Students must complete 36 hours of graduate credit (excluding any credit given for thesis and including the courses specified above under the thesis option) and a final oral examination over course work in sociology. Completion of these requirements leads to the M.A. degree but does not allow the student to proceed to doctoral study.

Ph.D. Degree Requirements
Regular admission to the doctoral program requires the M.A. degree with a major in sociology or a closely related field and evidence of scholarly accomplishment and capability equivalent to that demonstrated in an M.A. thesis or research paper (described above) in sociology. To receive the Ph.D. with a major in sociology, the student must
1. Obtain admission to the Ph.D. program.
2. Complete SOC 990 Ph.D. Proseminar unless SOC 790 M.A. Proseminar has been completed.
3. Carry out a program of study developed, initially, with a member of the graduate studies committee and, as soon as possible, with a doctoral advisory committee.
4. Attain the requisite levels of competence in the history and theory of sociology and in methods of sociological research by taking 9 hours of approved graduate courses in theory and completion of SOC 811 Sociological Research, SOC 812 Analytic Methods in Sociology, and one other graduate-level sociology methods course with an average grade of 3.0.
5. Complete the Foreign Language or Other Research Skills (FLORS) requirement, which may be satisfied by completion of three sociological methods courses as specified in (4) above. Additional information about the FLORS requirement can be found under Research Skills, Doctoral Degree Requirements in the General Information chapter of this catalog.
6. Pass two written examinations in special fields in sociology or related disciplines.
7. Complete three full academic years, or the bona fide equivalent, in study at this or another approved university, including time spent attaining the master’s degree.
8. Complete two semesters, normally consecutive, in study at KU. During this period, the student must be involved in full-time academic pursuits that may involve teaching or research activities. In this case, the minimum enrollment is 6 credit hours.
9. Pass an oral comprehensive examination. The candidate then enrolls for a minimum of 6 hours a semester and 3 hours a summer session until 18 hours or all requirements for the degree (whichever comes first) have been completed. If the degree is not complete after 18 hours of post-comprehensive enrollment, the candidate continues to enroll each semester and each summer session until all requirements for the degree have been met.

Handbook for Graduate Students
A more detailed account of advising procedures, degree requirements, and program options is set forth in the department’s Manual of Graduate Study in Sociology, which is sent with the application for admission to the program or given to anyone on request.

Sociology Courses
SOC 500 Sociological Theory (3).
SOC 510 Elementary Statistics and Data Analysis (3).
SOC 520 Groups and Associations (3).
SOC 521 Wealth, Power, and Inequality (3).
SOC 522 American Racial and Ethnic Relations (3).
SOC 523 Sociology of Aging and the Life Course (3).
SOC 524 Sociology of the Economy (3).
SOC 525 Sociology of Work (3).
SOC 529 Globalization (3).
SOC 530 Industrial Revolution and Capitalist Development (3).
SOC 531 Global Social Change (3).
SOC 532 Sociology of the Middle East (3). NW
SOC 533 Industrialization in Developing Nations (3).
SOC 534 Comparative Racial and Ethnic Relations (3). NW
SOC 535 Gender in the Global Context (3).
SOC 536 Ethnicity in the United States: _____. (3).
SOC 560 Law and Criminal Justice (3).
SOC 561 Sociology of Deviance (3).
SOC 562 Sociology of Law (3).
SOC 570 Social Conflict (3).
SOC 571 Collective Behavior (3).
SOC 572 Dispute Settlement (3).
SOC 573 Sociology of Violence (3).
SOC 598 Practicum in Crime and Delinquency Studies (3-6).
SOC 600 Sociological Perspectives: _____. (3)
SOC 601 Introduction to Feminist Social Theory (3).
SOC 610 Survey Research (3).
SOC 615 Techniques of Demographic Analysis (4).
SOC 617 Women and Health Care (3).
SOC 619 Political Sociology (3).
SOC 620 Social Organization (3).
SOC 621 Cross-Cultural Sociology (3). NW
SOC 622 Sociology of Science (3).
SOC 623 Women and Work (3).
SOC 624 Sociology of Health and Medicine (3).
SOC 625 Work Roles in Health and Medicine (3).
SOC 626 Religion and Society (3).
SOC 627 School and Society (3).
SOC 628 Sociology of the Family (3).
SOC 629 Sociology of Sport (3).
SOC 630 Latin American Society (3).
SOC 634 The Sociology of Culture (3).
SOC 640 Political Islam (3). NW
SOC 650 Transnational Migration (3).
SOC 660 Sociology of Mental Illness (3).
SOC 661 Causation of Crime and Delinquency (3).
SOC 662 Corrections (3).
SOC 671 Social Movements (3).
SOC 672 Sociology of War and Peace (3).
SOC 698 Individual Undergraduate Research (1-12).
SOC 707 Seminar in Historical Sociology (1-4). Each seminar will explore problems at the intersection of sociology and history. Topic, instructors, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics and students may take more than one topic. No prerequisite. LEC
SOC 722 Sociology of Gender (3). This course will offer a range of sociological perspectives on the role of gender in society. The particular substantive focus will vary each semester to allow flexibility for in-depth analysis of gender relationships in such areas as politics, health and aging, and work. LEC
SOC 760 Social Inequality (3). A comprehensive review of the major theoretical and empirical approaches used in the study of institutionalized social inequality.

The graduate program in sociology allows students to develop programs emphasizing traditional and nontraditional specialties in sociology or a combination of sociology and related fields.

KU’s Department of Sociology offered the first course in the nation in the field now called women’s studies.
Reference to the origins, forms, cultural and structural variations, and challenges associated with the construction of social realities and ideologies of social inequality. Prerequisite: A distribution course in sociology. LEC

SOC 762 Seminar in Social Deviation and Control:_____(3). Advanced study of theory and practice relating to deviation. May be repeated as topics vary. Prerequisite: SOC 201 or SOC 202 or SOC 205 or SOC 206. LEC

SOC 767 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABSC 787, AMS 767, COMS 787, and PSYC 787.) (Formerly HDFL 787.) LEC

SOC 770 Social Systems and Social Change in the United States (3). Analysis of approaches to the study of sociocultural change in America, with special emphasis on a systems perspective. Seniors by consent of instructor. LEC

SOC 771 Intergroup Relations and Conflict in American Society (3). Analysis of the dynamics of intergroup relations (e.g., class, religious, ethnic, racial, political) in America with special emphasis on the examination of major theoretical and empirical approaches employed in the study of societal conflict and consensus. LEC

SOC 780 Advanced Topics in Sociology:_____. (3). Topics will vary from semester to semester and instructor to instructor to allow flexibility for in-depth analysis of particular topics. LEC

SOC 790 M.A. Proseminar (3). Introduction to major disciplinary issues, departmental research specialties, faculty research interests, interdisciplinary connections, funding sources, and professional writing. Required of M.A. students entering the graduate program in sociology. May not be taken by those who have credit for SOC 791. LEC

SOC 801 The Rise of Social Theory (3). This is less a survey of intellectual history than an effort to trace the "preclassical" roots of sociological theory. We explore the rise of paradigmatic concerns in the writings of such key figures as Aristotle, Marsilius of Padua, Hume, Hume, Spinoza, Michel de Montaigne, Charles de Montesquieu, Jean-Jacques Rousseau, Immanuel Kant, G.W.F. Hegel, Flora Tristan, and Ludwig Feuerbach, among others. LEC

SOC 802 Modern Social Theory (3). This seminar will focus on the later 19th and early 20th century "theories of society," addressing the origins and developmental tendencies of Western modernity and their relation to premodern social orders. Primary texts of the major theorists (e.g., Marx, Durkheim, Nietzsche, Weber, Simmel, and Mead) will be studied in historical context. The tradition's analytical and critical resources and problems associated with them will also be explored. The connections between this tradition and contemporary sociological approaches will be explored. LEC

SOC 803 Issues in Contemporary Theory:_____. (3). A critical examination of recent trends and debates in sociological theory. This is a thematically oriented course in which class discussions will focus on temporary and permanent theoretical developments. Attention will be directed to theoretical issues under discussion in fields such as symbolic interactionism, semiotics, ethnoscience, critical theory, macrosociology, and others. LEC

SOC 804 Sociology of Knowledge (3). This course reviews the major sociological approaches to the study of the relationship between thought and the social context within which it is found. Special concern is an examination of the relationship between ideology and social structures, particularly as expressed in the construction of official knowledge. LEC

SOC 808 Feminist Theories (3). This course will explore and evaluate accounts of social structures, social processes, and consciousness developed in the body of feminist literature. We will review a range of theoretical arguments, including liberal, historical, materialist, psychoanalytic, cultural, and Black feminist theories. Some of the readings will focus on the developments and directions taken within main body of sociological theory; others will center on the development of alternative social theory using the standpoint of women as a point of departure. LEC

SOC 811 Sociological Research (3). The use of the scientific method to study social phenomena including: the formulation and testing of hypotheses; techniques for collecting data; measuring social variables; interpreting research findings; the relationship of theory and facts. Prerequisite: A distribution course in sociology. LEC

SOC 812 Analytic Methods in Sociology (3). Consideration of quantitative methods of analysis including both parametric and non-parametric techniques. Prerequisite: A course in statistics. LEC

SOC 813 Field Methods and Participant Observation (3-5). Will acquaint the student both theoretically and empirically with the procedures and logics of the research techniques employed by individuals or small research teams conducting qualitative research. A distribution course in sociology. LEC

SOC 814 Health Services Research: Epidemiology, Evaluation, and Survey Methods (3). Students learn the logic, assumptions, designs, and procedures involved in conducting the major types of research found in the health services field. Students develop an informed basis for critically evaluating the methodological adequacy of research studies in the areas of descriptive and analytic epidemiology, program evaluation, and health-related survey research as well as working knowledge of the research process itself. Emphasis is placed on examining basic health service issues related to measuring quality of care, understanding Flemington's social factors in the etiology of disease, determining the health status and health needs of populations, and incorporating health services research into organizational planning and decision-making. (Same as HP&M 821.) Prerequisite: HP&M 710 or equivalent, HP&M 810 and HP&M 812 or consent of instructor. LEC

SOC 824 Health and Social Behavior (3). This course provides students with an analytic understanding of the organization, professional, and interpersonal behavior that characterizes contemporary health and health care. Emphasis is placed on examination and integration of conceptual frameworks and research findings bearing on basic behavioral/managerial issues such as authority relations in health organizations, the sociology of illness and behavior, and the impact of organizational structure on employee and client attitudes and behavior, and the culture of professional medicine in relation to patient care. (Same as HP&M 835.) Prerequisite: HP&M 810 and HP&M 830 or consent of instructor. LEC

SOC 830 Latin American Society (3). Aspects of the social organization of main Latin American nations, including, e.g., race/ethnicity, social class, gender, urbanization, socioeconomic development, revolution, and relations with the U.S. Emphasis on sociological theories of Latin American development. Prerequisite: A principal course in sociology. LEC

SOC 837 International Political Economy (3). Provides a broad survey of major developments in the field. Topics include the intellectual origins of international political economy; the historical evolution of the international system; North-South and Western trade, investment, and monetary relations; foreign aid, debt technology transfer, development, international economic institutions (e.g., International Monetary Fund, World Bank, Multinational Corporations, etc.). (Same as POLS 973.) LEC

SOC 875 The Political Economy of Globalization (3). This course will examine students with recent developments in the global economy, including its impact on politics and society. Topics include theories of globalization, the role of the national state and international agencies in socioeconomic development, inequality from a global perspective, immigration and citizenship, globalization and democracy, and the rise of transnational social movements. LEC

SOC 891 Individual Master's Readings (1-6). Individual study of special topics or problems for students working on a master's degree. RSH

SOC 892 Teaching Seminar (1-3). Seminar on sociology course design and development. Topics covered include syllabus design, exam strategies and design, course design, content of and approaches to teaching introductory and other sociology courses, student grading and evaluation. Required of all teaching assistants assigned to courses in sociology. May not be repeated for credit toward graduate degree. LEC

SOC 901 Thesis (1-8). THE

SOC 900 Seminar on Special Topics in Theory:_____. (1-4). Each seminar will explore problems of theory in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 902 Seminar on Special Topics in Social Organizations:_____. (1-4). Each seminar will explore problems of methods in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 930 Seminar on Special Topics in Comparative Studies:_____. (1-4). Each seminar will explore problems of comparative studies in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 940 Seminar on Topics in Demography, Ecology, and Community:_____. (1-4). Each seminar will explore problems of demography, ecology, and community in sociology. Topic, instructor, and credit hours will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 950 Seminar on Special Topics in Social Psychology:_____. (1-4). Each seminar will explore problems of social psychology in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 960 Seminar on Special Topics in Deviance and Social Problems:_____. (1-4). Each seminar will explore problems of deviance and social problems in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 970 Seminar on Special Topics in Social Conflict and Change:_____. (1-4). Each seminar will explore problems of social conflict and change in sociology. Topic, instructor, and hours of credit will be announced in the Schedule of Classes. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 990 Ph.D. Proseminar (3). Survey of major disciplinary issues and introductions to departmental research specialties, faculty research interests, interdisciplinary connections, funding sources, and professional writing. Required of Ph.D. students entering the graduate program in sociology. May not be taken by those with credit for SOC 790. Prerequisite: PH&M 810 or consent of instructor. LEC

SOC 991 Individual Doctoral Readings (1-6). Individual study of special topics or problems for students working on a doctorate. RSH

SOC 999 Dissertation (1-12). THE
Spanish and Portuguese

Chair: Vicky Unruh
Graduate Student Admissions: Jorge Perez
Director of Graduate Studies: Santa Arias
Wescoe Hall, 1445 Jayhawk Blvd., Room 2650
Lawrence, KS 66045-7594, www2.ku.edu/~spanport, (785) 864-3851
Professors: Anderson, Kuhnheim, Mayhew, Unruh
Professors Emeriti: Chamberlin, Doudoroff, Johnson, Souza, Spires, Woodyard
Associate Professors: Arias, Day, Manning, Rivera, Simões
Associate Professor Emeritus: Weiss
Assistant Professors: Bayliss, Padilla, Pérez, Rossomondo, Sneed, Versteeg
Specialist: Postma-Carttar

The department offers a full graduate program leading to the M.A. and the Ph.D. degrees. Students who complete their graduate studies with the M.A. degree are well prepared to enter a variety of fields, including international business, teaching, and government. The Ph.D. program takes advantage of the literature specialties of the faculty, and Ph.D. recipients generally go on to university or college teaching.

A detailed description is available from the department office as well as the Web site. This includes specific distribution requirements, fields of specialization, and information on the comprehensive examinations. Students should request information and application forms as early as possible, especially if they plan to apply for financial aid.

Admission
Submit your application online at www.graduate.ku.edu.
Send all other requested application materials to:
The University of Kansas
Department of Spanish and Portuguese
Wescoe Hall, 1445 Jayhawk Blvd., Room 2650
Lawrence, KS 66045-7594

M.A. Degree Requirements
The department offers the M.A. degree with a concentration in literature or language/literature/culture.

Admission
1. The applicant must hold (or anticipate completing by the time of admission) a B.A. or B.S. degree from an accredited U.S. college or university or the equivalent degree from a foreign university, must have 15 semester hours of literature courses at the survey level or above in Spanish or the equivalent of the undergraduate major in Spanish at KU, and must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall. 2. A reading knowledge of another foreign language, as approved by the department.

3. A general examination in the field of Hispanic literature, partly written and partly oral.

Language/Literature/Culture Concentration Requirements
1. A minimum of 30 hours of graduate credit, as listed below.
2. A general examination, partly written and partly oral, based on the appropriate department reading lists for this degree.

Language/Literature/Culture Concentration Requirements
1. A minimum of 30 hours of graduate credit, as listed below.
2. A general examination, partly written and partly oral, based on the appropriate department reading lists for this degree.

Literature Concentration Requirements
1. A minimum of 30 hours of graduate credit in literature, including one seminar in Peninsular literature or in Spanish-American literature.
2. A reading knowledge of another foreign language, as approved by the department.
3. A general examination in the field of Hispanic literature, partly written and partly oral.

Ph.D. Degree Requirements
The degree of Doctor of Philosophy is offered with emphasis on Spanish or Spanish-American literature.

Admission
1. The applicant must hold (or anticipate completing by the time of admission) an M.A. or M.S. degree from an accredited U.S. college or university or the equivalent degree from a foreign university; must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall; and must meet general requirements.

2. Strong consideration is given to letters of recommendation, breadth and depth of preparation, and Graduate Record Examination scores, if available.

Requirements. Once admitted, the aspirant must (1) present a reading knowledge of two foreign languages, other than Spanish, appropriate to the specialization; (2) complete all course work prescribed by the advisory committee (this course work is to include a minimum of five seminars, at least four at KU, and a guideline of a minimum of 24 hours in Hispanic literatures at KU beyond the 30 hours required for the M.A. degree); (3) present a minor in a field other than Spanish or Spanish-American literature; (4) complete a minimum of two semesters of quarter-time teaching or one semester of half-time teaching in the Department of Spanish and Portuguese; (5) pass a comprehensive examination, partly written and partly oral; and (6) write and defend a dissertation.

See also the general requirements for the Doctor of Philosophy degree in the General Information chapter of this catalog.

Study Abroad
Graduate students have the opportunity to teach and conduct research during summer sessions in Puebla, Mexico; or Barcelona, Spain. The department also has a graduate exchange agreement with the University of Santiago de Compostela, Spain.

Portuguese Courses
PORT 509 Phonetics (2).
PORT 540 Textual Analysis and Critical Reading (3). HL.
PORT 547 Brazilian Studies: _____ (3).
PORT 548 Portuguese Language and Brazilian Culture for Business (3).

KU’s doctoral program in Spanish ranked among the top five in the nation in a series of evaluations by the Conference Board of Associated Research Councils.

KU’s library collection on Central America is one of the top three in the nation.

The KU academic year in Costa Rica is the oldest continually operated university exchange program between a U.S. and a Latin American university.
Spanish Courses

SPAN 500 Hispanic Literature in Translation: (3).

SPAN 520 Structure of Spanish: (3).

SPAN 522 Advanced Studies in Spanish Language: (3).

SPAN 540 Colloquium on Hispanic Studies: (5).

SPAN 550 Colloquium on Spanish Film: (3).

SPAN 560 Colloquium on Latin American Film: (3).

SPAN 566 Latin American Literature: (3).

SPAN 568 Spanish Ballads: (3).

SPAN 570 Studies in Hispanic Linguistics: (3).

SPAN 681 Language Teaching for Oral Proficiency: (1).

SPAN 717 History of the Spanish Language: (3). The phonological and lexical development of the Spanish language from spoken Latin to the present; major dialectal features. Prerequisite: A course in Spanish phonetics. LEC

SPAN 720 Syntax and Composition: (3). Syntactical analysis of modern Spanish usage; principles of expository writing. Prerequisite: A course in advanced composition or structure, or graduate standing. LEC

SPAN 722 Special Topics in Spanish Literature: (2-3). The content of this course will vary, and the course may be taken more than once with full credit; provided there is no duplication in the material studied. Prerequisite: A course in Spanish peninsular literature taught in Spanish. LEC

SPAN 730 Literature of 13th- and 14th-Century Spain: (3). A critical survey of representative works from 13th and 14th-century Castile. Prerequisite: Survey course(s) in Spanish literature from its beginning through the present, or graduate standing. LEC

SPAN 733 Print Culture in Early Modern Spain: (3). A study of the literature produced during the period of early printed books with emphasis on the diffusion of new literary forms during the 15th- and early 16th-centuries. Prerequisite: Survey course in Spanish literature from its beginning through the present, or graduate standing. LEC

SPAN 735 Poetry and Sentimental Romance in 15th-Century Castile: (3). Survey of the poetry and prose of the fifteenth century with particular attention to the literature produced during the reign of the Catholic Kings. Prerequisite: Survey course in Spanish literature from its beginning through the present, or graduate standing. LEC

SPAN 739 Spanish Drama of the Golden Age: (3). Selected plays of such authors as Lope de Vega, Alarcón, Tirso de Molina, Calderón, and Moreto. Prerequisite: A survey of Spanish literature through the Golden Age. LEC

SPAN 740 Lope de Vega and His School: (3). Intensive study of selected works by Lope de Vega, Tirso de Molina, Guillén de Castro, Mira de Amescua, and Ruiz de Alarcón. Prerequisite: SPAN 739 or equivalent. LEC

SPAN 741 Calderón and His School: (3). Intensive study of selected works by Calderón de la Barca, Rojas Zorrilla, and Agustín Moreto. Prerequisite: SPAN 739 or equivalent. LEC

SPAN 742 The Spanish Novel in the Renaissance and Golden Age: (3). From the Celestina to the middle of the 17th century. Prerequisite: A survey course of Spanish literature through the Golden Age. LEC

SPAN 744 Spanish Lyric Poetry of the Golden Age: (3). A survey of Spanish poetry from Garcilaso de la Vega through Quevedo including both major and minor poets. Prerequisite: A survey level course on Spanish literature through 1700. LEC

SPAN 745 Don Quixote: (3). Linguistic and literary study. Examination of traditional interpretations. The life and thought of Cervantes. Collateral readings. Prerequisite: A survey of Spanish literature through the Golden Age. LEC

SPAN 747 The Spanish Theatre before Lope de Vega: (3). Prerequisite: A course in Spanish drama of the Golden Age. LEC

SPAN 752 Spanish Literature of the 18th Century: (3). The neo-classic movement; the traditionalist reaction; the beginnings of Romanticism. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC

SPAN 754 Romanticism: (3). The development of the Romantic movement in Spain. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC

SPAN 755 Nineteenth-Century Spanish Novel: (3). The rise and development of realism. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC

SPAN 760 Nineteenth-Century Spanish Drama: (3). A survey of the main currents and aesthetic trends in the nineteenth-century Spanish theatre: Neo-Classicism, Romanticism, Costumbriismo, Realismo (Alta Comedia), Neo-Romanticism, and the innovations of Galdós and Benavente. Prerequisite: A course in Spanish literature from the 19th century to the present. LEC

SPAN 761 Twentieth-Century Spanish Drama: (3). A survey of major plays and playwrights of 20th century Spain with reference to critical theory of text as literature and performance. LEC

SPAN 762 The Spanish Novel Since the Civil War: (3). A study of the major works and movements occurring since the Spanish Civil War. LEC

SPAN 764 Modern Spanish Poetry: (3). Modern poetry of Spain, beginning with Becquer and ending with the “Generation of the 1920’s.” Close study of the works of the major poets; readings in poetic theory. Prerequisite: A general survey course of Spanish literature from its beginning through the present, or graduate standing. LEC

SPAN 765 Contemporary Spanish Poetry: (3). Contemporary poetry of Spain, beginning with the “Generation of the 1920’s” and including the post-Civil War period. Close study of the work of several poets; readings in poetic theory. Prerequisite: A general survey course in the literature of Spain since the Golden Age. LEC

SPAN 767 Spanish Modernist Novel: (3). A diachronic study of the syntax and morphology of Spanish from the thirteenth century to the present; sound change and orthography; evolution of literary styles. Prerequisite: A course in Spanish phonetics. LEC

SPAN 770 Spanish-American Drama: (3). Study of several exceptional plays of 20th century Spanish America in light of critical methodologies, national theatre movements and performance aspects. LEC

SPAN 771 Spanish-American Literature: (3). A survey by region or country (Mexican literature, Cuban literature, Argentine literature, Caribbean literature, etc.) of Spanish American literature from the beginning to the present, with emphasis on the 19th and 20th centuries. Course title will vary by country or region. Prerequisite: A course survey in Spanish American literature. LEC

SPAN 772 The Modern Spanish-American Novel, 1900-1950: (3). A study of selected novels in Spanish America from the 1900 to 1950. Topics may vary. Prerequisite: A survey course in Spanish American literature. LEC


SPAN 774 Spanish-American Poetry: (3). Major poets, since 1914, with emphasis on Vallejo, Borges, Neruda, and Paz. LEC

SPAN 776 Spanish-American Short Story: (3). A study of aspects of the short story tradition in Spanish America from its origins to the present. Topics may vary. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 781 Spanish-American Colonial Studies: (3). A survey of the intellectual life and literature of Spanish America from the Iberian conquest until Independence. Prerequisite: A course survey in Spanish American literature. LEC

SPAN 782 Spanish-American Prose Fiction: (3). A survey by region or country (Mexican Prose Fiction, Cuban Prose Fiction, Argentine Prose Fiction, Caribbean Prose Fiction, etc.) of Spanish American Prose Fiction from the beginning to the present, with emphasis on the 19th and 20th centuries. Course title will vary by country or region. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 784 Spanish-American Modernism and Vanguards: (3). A study of the poetry of Vallejo, Borges, Neruda, and Paz. LEC

SPAN 785 Special Topics in Spanish-American Literature: (2-3). The content of this course will vary, and the course may be taken more than once with full credit; provided there is no duplication in the material covered. Prerequisite: A course in Spanish American literature or permission of instructor. LEC

SPAN 788 Special Topics in Spanish-American Literature: (3). An introduction to linguistics and applied linguistics focused on the phonology, morphology, and syntax of Spanish, including work in grammemics and transformational grammar. Prerequisite: A course in phonetics or problems of language instruction, testing, and use of the language laboratory. LEC

SPAN 792 The Picaresque Novel: (3). A survey of the picaresque mode in Hispanic literature, and detailed analysis of selected texts. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 793 Spanish Linguistics: Theory and Application to Teaching: (3). An introduction to linguistics and applied linguistics focused on the phonology, morphology, and syntax of Spanish, including work in grammemics and transformational grammar. Prerequisite: A course in phonetics or problems of language instruction, testing, and use of the language laboratory. LEC

SPAN 794 The Picaresque Novel: (3). A survey of the picaresque mode in Hispanic literature, and detailed analysis of selected texts. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 795 Literary Theory and Criticism: (3). Systematic study of the development of theories of literature. Emphasis usually placed on twentieth century although scope may vary. Prerequisite: 700-level course in Spanish or concurrent enrollment. LEC

SPAN 801 Teaching Spanish in Institutions of Higher Learning: (3). Required of all teachers of Spanish who teach beginning Spanish at the University of Kansas for the first time. Instruction in classroom procedures for first year Spanish, demonstration of teaching techniques, and survey of current methodology. FLD

SPAN 802 Colloquium in Methods of Teaching Spanish Language (1-3). Combines discussion of theoretical teaching concepts and development of pedagogical mate-
Spanish & Portuguese | Speech-Language-Hearing: Sciences & Disorders | Women, Gender, & Sexuality Studies

rials with practical solutions to problems arising concurrently in Spanish language courses. Required for all GTAs teaching Spanish at the 100 and 200 levels. LEC.

SPAN 817 Spanish Historical Grammar (3). A diachronic study of the syntax and morphology of Spanish from the thirteenth century to the present; sound change and orthography; evolution of literary styles. Prerequisite: A course in Spanish phonetics. LEC.

SPAN 898 Investigation and Conference (1-10). Individually directed work to fill the student’s needs not met by available organized courses. One to three hours of credit in any semester. Maximum total credit for the M.A. degree is three hours. May be taken with full credit as often as recommended by department. THE.

SPAN 922 Seminar in Spanish Literature and Culture: _____ (3). An intensive investigation of a particular topic in Spanish Literature and Culture; content will vary in terms of topics, genres, and time periods covered. The course may be taken more than once with full credit, provided there is no duplication. Prerequisite: Graduate standing. LEC.

SPAN 940 Seminar in Trans-Atlantic Literatures and Cultures: _____ (3). An intensive investigation of a particular topic in Spanish and Latin American Literatures and Cultures; content will vary in terms of topics, genres, and time periods covered. The course may be taken more than once, with full credit provided there is no duplication. Prerequisite: Graduate standing. SEM.

SPAN 950 Seminar: Spanish Drama: _____ (3). LEC.
SPAN 952 Seminar: Spanish Novel: _____ (3). LEC.
SPAN 954 Seminar: Spanish Poetry: _____ (3). LEC.
SPAN 956 Seminar: Spanish Short Story: _____ (3). LEC.
SPAN 958 Seminar: Spanish Essay: _____ (3). LEC.
SPAN 961 Seminar: Medieval Literature: _____ (3). LEC.
SPAN 962 Seminar: Cervantes: _____ (3). LEC.
SPAN 970 Seminar: Spanish-American Drama: _____ (3). LEC.
SPAN 972 Seminar: Spanish-American Novel: _____ (3). LEC.
SPAN 974 Seminar: Spanish-American Poetry: _____ (3). LEC.
SPAN 976 Seminar: Spanish-American Short Story: _____ (3). LEC.
SPAN 985 Seminar in Spanish-American Literature and Culture: _____ (3). An intensive investigation of a particular topic in Spanish American Literatures and Cultures; content will vary in terms of topics, genres, and time periods covered. The course may be taken more than once, with full credit provided there is no duplication. Prerequisite: Graduate standing. SEM.

SPAN 999 Dissertation (1-12). THE.

Speech

See Communication Studies.

Speech-Language-Hearing: Sciences and Disorders

For a description of master’s and doctoral degree programs, see Communicative Disorders: Intercampus Program in this chapter of the catalog.

For Audiology courses, see Communicative Disorders: Intercampus Program in the School of Allied Health chapter. For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in this chapter.

Systematics and Ecology

See Biological Sciences: Ecology and Evolutionary Biology.

Theatre

See Theatre in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

Turkish

See Slavic Languages and Literatures.

Ukrainian

See Slavic Languages and Literatures.

Visual Art

See Visual Art in the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

Women, Gender, and Sexuality Studies

Director: John G. Younger
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7545,
www.womensandgender.ku.edu, (785) 864-2310

Professors: Muehlenhard, Schofield, Younger
Associate Professors: Ajayi-Soyinka, Britton, Vicente
Assistant Professors: Hart, Sarawat, Takeyama


The Women, Gender, and Sexuality Studies Program supports interdisciplinary research on women, gender, and sexuality and administers an interdisciplinary program leading to a graduate certificate in women, gender, and sexuality studies. Additional cross-referenced courses are available. Students may pursue the graduate certificate in addition to a graduate degree or as a stand-alone program.

Admission

Admission requires a bachelor’s degree and acceptance by Graduate Studies. Submit your application at www.graduates.ku.edu.

If you are applying to a specific M.A. or Ph.D. program, submit your application, fees, letters of recommendation, Graduate Record Examination scores, official transcripts, and any other requested materials to that program. Once you are accepted by that program, send to WGSS at the address below a recent transcript and a cover letter expressing your desire to earn the WGSS graduate certificate. If you are applying as a nondegree-seeking student and have been accepted by Graduate Studies, send two letters of recommendation and a cover letter expressing your desire to earn the WGSS graduate certificate to

The University of Kansas
Women, Gender, and Sexuality Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7545

See the General Information chapter of this catalog for a list of approved graduate certificate programs.

Overall, KU has 42 nationally ranked programs — 15 in the top 10 among public universities — according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
Graduate Certificate Requirements

The graduate certificate requires completion of 12 credit hours of graduate work, including WGS 801 Women and Gender Studies: Theory and Methods; WGS 898 Research Colloquium; and two 3-hour electives from two different disciplines, chosen from a list of recommended graduate courses or approved by the graduate director.

Required Graduate Courses (6 credit hours).

- WGS 801 Women and Gender Studies: Theory and Methods
- WGS 898 Research Colloquium

Recommended Graduate Electives (6 credit hours).

- WGS 510/AMS 510/HIST 530 History of American Women: Colonial Times to 1870
- WGS 511/AMS 511/HIST 531 History of American Women: 1870 to Present
- WGS 512/AMS 512/HIST 532 History of Women and Work in Comparative Perspective
- WGS 520 Women and Violence
- WGS 549/HIST 649 History of Feminist Theory
- WGS 560/AAAS 560 Race, Gender and Post-Colonial Discourses
- WGS 562/POLS 562 Women and Politics
- WGS 580 Feminism and Anthropology
- WGS 600/POLS 600 Contemporary Feminist Political Theory
- WGS 601 Seminar in Women, Gender, and Sexuality Studies
- WGS 646/HIST 646 Witches in European History and Historiography
- WGS 651/POLS 651 Women and Politics in Latin America
- WGS 660 Human Reproduction: Culture, Power, and Politics
- WGS 665 Women, Health, and Healing in Latin America
- WGS 696 Studies in: ______ (3).

WGSS 898 Research Colloquium (3). This course is the “capstone” to the Women’s Studies Graduate Certificate program. Members of the seminar will produce a major paper and will share their research. During the first part of the term a small number of visitors (professors at KU and/or visiting speakers from other universities) will be invited to assign readings and subsequently present their work on women and gender. Students will be expected to attend the Gender Seminar of the Hall Center for the Humanities. Prerequisite: WGS 801 and at least 3 hours of other graduate work in the Women’s Studies graduate certificate program, or by special permission. LEC

WGSS 580 Feminism and Anthropology (3).
WGSS 583 Love, Sex, and Globalization (3).
WGSS 600 Contemporary Feminist Theory (3).
WGSS 601 Seminar in Women’s Studies (3).
WGSS 646 Witches in European History and Historiography (3).
WGSS 650 Service Learning in Women’s Studies (3).
WGSS 651 Women and Politics in Latin America (3).
WGSS 653 Gender, War, and Peace (3).
WGSS 662 Gender and Politics in Africa (3).
WGSS 665 Women, Health, and Healing in Latin America (3).
WGSS 689 Conceptual Issues in Human Sexuality (3).
WGSS 696 Studies in: ______ (3).

WGSS 701 Seminar in: ______ (3). A research seminar in women’s studies. Instructor and topic will vary. LEC

WGSS 789 Anthropology of Gender: Advanced Seminar in the Four Fields (3). This seminar is intended primarily for graduate students in anthropology or other disciplines who share an interest in any of the subdisciplines of anthropology (archaeology, linguistics, biological anthropology, and sociocultural anthropology) and/or anthropological theories and methods. Undergraduates pursuing Honors or other major research projects are also encouraged to participate. Students will receive training in the current theories, research, and pedagogies of graduate anthropology of gender. Class participants will explore how these materials intersect with their current thesis or research projects and develop syllabi specific to their subdiscipline. (Same as ANTH 789). Prerequisite: Permission of instructor. LEC

WGSS 801 Women and Gender Studies: Theory and Methods (3). This course will be intensive interdisciplinary overview of the major theories and research approaches in literature on women and gender. The topics covered will include the following: 1) an overview of feminist theories; 2) an overview of how feminist theories can be integrated with research methods in various disciplines; and 3) examples of applications of feminist theories and methods to specific content areas. Open only to graduate students. LEC

WGSS 835 Colloquium in the History of Gender (3). This colloquium will cover theoretical and topical readings on the history of manhood, womanhood, and gender systems. (Same as AMS 835 and HIST 895). LEC

WGSS 836 Colloquium in United States Women’s History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as AMS 836 and HIST 896). LEC

WGSS 837 Comparative Colloquium in Women’s History (3). This colloquium will approach the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as AMS 837 and HIST 897). LEC

WGSS 873 Seminar in United States Women’s History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper on a primary source, and present those papers to the seminar for evaluation. (Same as HIST 973 and AM S 973). LEC

WGSS 880 Advanced Feminist Anthropology: ______ (3-6). Intensive consideration of special problems in feminist anthropology. Topics for the semester to be announced. May be repeated for a total of six hours credit. (Same as ANTH 880). Prerequisite: Permission of instructor. LEC

WGSS 898 Research Colloquium (3). This course is the “capstone” to the Women’s Studies Graduate Certificate program. Members of the seminar will produce a major paper and will share their research. During the first part of the term a small number of visitors (professors at KU and/or visiting speakers from other universities) will be invited to assign readings and subsequently present their work on women and gender. Students will be expected to attend the Gender Seminar of the Hall Center for the Humanities. Prerequisite: WGS 801 and at least 3 hours of other graduate work in the Women’s Studies graduate certificate program, or by special permission. LEC

Women, Gender, & Sexuality Studies

- WGS 510 History of American Women: Colonial Times to 1870 (3).
- WGS 511 History of American Women: 1870 to Present (3).
- WGS 512 History of Women and Work in Comparative Perspective (3).
- WGS 513 Modern American Women in Film and Literature (3).
- WGS 520 Women and Violence (3).
- WGS 549 History of Feminist Theory (3).
- WGS 560 Race, Gender, and Post-Colonial Discourses (3).
- WGS 562 Women and Politics (3).
- WGS 565 Gender, Culture, and Migration (3).

See the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog for graduate programs in film and media studies, theatre, and visual art.

See the College of Liberal Arts and Sciences: School of the Arts and the School of Architecture, Design and Planning chapters of this catalog for graduate programs in design.

Zoology

See Biological Sciences: Ecology and Evolutionary Biology.
Contents

Facilities .............................................................. 270
Dance .................................................................. 271
  Dance Courses ..................................................... 271
Film & Media Studies ........................................... 271
  Admission ............................................................ 271
  M.A. Degree Requirements .................................. 271
  Requirements for the M.A. in Film & Media Studies 271
  Ph.D. Degree Requirements ................................. 272
  Ph.D. Degree in Film & Media Studies ................. 272
  Film & Media Studies Courses ............................ 272
Theatre ................................................................ 273
  Admission ............................................................ 273
  M.A. Degree Requirements .................................. 273
  Requirements for the M.A. in Theatre ................. 273
  Master of Fine Arts in Design with a Concentration in
  Scenography Degree Requirements .................... 273
  Ph.D. Degree Requirements ................................. 274
  Ph.D. Degree in Theatre ....................................... 274
  Theatre Courses ................................................... 274

Visual Art ............................................................... 275
  Admission ............................................................ 275
  Master of Fine Arts in Art Degree Requirements .... 275
  Concentrations in Expanded Media, Drawing & Painting, Printmaking, & Sculpture 275
  Art Courses ....................................................... 276
  Drawing Courses ............................................... 276
  Expanded Media Courses .................................... 276
  Painting Courses ............................................... 276
  Printmaking Courses ......................................... 276
  Sculpture Courses ............................................. 277
  Master of Fine Arts in Design Degree Requirements 277
  Concentrations in Ceramics, Metalsmithing & Jewelry, Textile Design 277
  Advanced Design Studies Courses ....................... 277
  Ceramics Courses .............................................. 277
  Metalsmithing/Jewelry Courses ............................ 277
  Textile Design Courses ....................................... 277
  Master of Arts in Visual Art Education .................. 277
  Admission ............................................................ 277
  M.A. Degree Requirements .................................. 277
  Graduate Licensure in Art Education ................. 277
  Visual Art Education Courses ............................. 278

See pages 12-13 for admission procedures.

Application fees: Domestic students in the CLAS School of the Arts: paper $55, online $45.
International students in the CLAS School of the Arts: paper $60, online $55.

The 2,100-square-foot Art and Design Gallery features new exhibitions of art by students and faculty members every two weeks.
The 130,000-square-foot Art and Design Building houses all major art and design programs, including studios and offices. The building houses the 2,100-square-foot Art and Design Gallery; this space features new exhibitions every two weeks and serves as an important component of the teaching mission. Each major program offers all students spacious work areas and a range of equipment, from traditional to the newest digital technology. Students have access to multipurpose computer labs with the most commonly used current software for photography, animation, CAD, 3-D, video production, desktop publishing, scanning, illustration, large- and medium-format plotters, and color and black-and-white laser printers. Unique satellite computer labs, in addition to the main computer lab in the Department of Visual Art, offer a range of woodworking equipment, a plastic vacuum former, and dedicated computer lab for serigraphy and textile design. A Master of Arts degree in visual art education and textile design is granted by the University of Kansas. The Art and Design Building also provides studio space for graduate students.

Three large, well-equipped painting studios. The print studios consist of 8,000 square feet of workspaces and a dedicated computer lab for serigraphy, lithography, and intaglio. The intaglio studio has five presses and a separate acid room. The lithography studio has three presses and various sizes of stones. The serigraphy studio has 12 printing stations, a lithography, and intaglio studio. The sculpture studio is divided into five general work areas with appropriate equipment: woodworking, metal fabrication, foundry, an open courtyard, and individual studios. The foundry contains equipment necessary for casting with a variety of kilns, three gas-fired furnaces, and an overhead crane. There is an induction furnace with a lift-swing unit for bronze and a tilt box unit for iron and steel. Graduate students have individual studios.

The 3,800-square-foot metalsmithing and jewelry studio has eight rooms with separate areas for soldering, metalsmithing, plating/electro-forming, a finishing room, casting, gas and TIG welding, enameling, and a student-operated supply store. Matrix GemVision computer software is available for students to develop three-dimensional jewelry models. The ceramics area includes 5,300 square feet of studio space in the Art and Design building as well as separate west campus Chamney barn facilities. Kilns include salt, soda, cross-draft wood, anagama wood-fired, raku, an electric test kiln, and several kinds of gas and electric kilns. The textile design area has separate weaving, screen-printing, sewing, and dye areas. The weaving studios are equipped with four-, eight-, and 16-harness floor looms and two 16-harness AVL compu-dobby looms. The sewing area includes traditional machines, sergers, and a computer-aided embroidery machine. The textile Mac computer lab offers numerous software applications specific to weaving and surface design including jaccard weaving CAD software. All areas provide studio spaces for graduate students.

Murphy Hall houses all major theatre programs and serves as a venue for students in the School of Music. Crafton-Preyer Theatre is a large proscenium theatre seating 1,181. It is equipped with a full-stage turntable, a hydraulic orchestra pit elevator, cutting-edge lighting and sound control equipment, and a recently renovated counterweight line system. William Inge Memorial Theatre is a 50-foot by 50-foot black box theatre with flexible seating for approximately 120. It is also equipped with excellent lighting and sound control equipment. Well-equipped shops for scenery, costume, and props construction, as well as a lighting maintenance laboratory serve the production areas.

Programs in film and media studies are housed in the 18,000-square-foot Oldfather Studios, a fully equipped film and video production facility featuring a soundstage, sound and editing suites, screening rooms and classrooms. In these contemporary workspaces, students have the opportunity to plan, produce, and edit film and video using current technologies.

The Helen Foresman Spencer Museum of Art is regarded as one of the most innovative university museums and has long been considered one of the top teaching museums in the country. Five galleries display selections from the permanent collection of more than 36,000 works of art. Areas of special strength include medieval art; European and American paintings, sculpture, and prints; photography; Japanese Edo-period paintings and prints; 20th-century Chinese paintings; and an ethnographic collection that includes 10,000 Native American, African, Latin American, and Australian works. Spencer Museum sponsors exhibitions, lectures, films, workshops, and activities that support curricular instruction in the arts. The museum houses galleries and offices; an auditorium; the Kress Foundation Department of Art History; and the Murphy Art and Architecture Library, with more than 170,000 volumes and 600 current journals documenting the visual arts, design, and architecture from all cultures, from antiquity to the present.

The Lied Center of Kansas is a multipurpose performing arts facility with a 2,000-seat performing arts hall. It offers outstanding presentations of music, dance, and theatre, as well as lectures by artists and scholars. The Lied Center is a major regional presenter and provider of performing arts. To enrich diversity and perspective, the art department as well as the Spencer Museum or Art, the Hall Center for the Humanities, and the Lied Center present active visiting artist programs.
Dance

Division Director: Jerel Hilding
Robinson Center, 1301 Sunny Side Ave., Room 251
Lawrence, KS 66045-7250, (785) 864-2464
Professor: Hamburg
Associate Professors: Cohan, Hilding
The Department of Dance does not offer graduate degrees. Graduate courses in dance are available to qualified persons working on advanced or interdisciplinary programs.

Dance Courses

DANC 530 Practicum in Dance (1-3).
DANC 540 Field Experience in Dance Teaching (1-3).
DANC 550 Senior Project (3).
DANC 580 Special Topics in Dance (1-3).
DANC 598 Seminar in Dance (3).
DANC 735 Analysis, Criticism, and Choreography (3). The choreographic approaches of outstanding dance masters of the past (for example, Marius Petipa and Isadora Duncan) and present (for example, Martha Graham and Merce Cunningham) will be analyzed in terms of their handling of gesture, time, space, structure, and meaning. Students will be expected to seek out and study readings, photographs, and films in order to do written and performance projects based on the choreographic principles of old and new masters in ballet and modern dance. Prerequisite: A course in dance choreography or consent of instructor. ETC
DANC 740 Introduction to Laban Movement (3). This course will introduce both the theoretical and physical applications of Laban Movement Analysis: Effort/Shape Notation (a notation system recording changes in movement qualities with respect to time, weight, space, and energy flow); Space harmony (a system that describes human movement in relation to space); Bartenieff Movement Fundamentals (a series of basic exercises to integrate and facilitate the neuromuscular connections within the body); and Laban Movement Analysis to the fields of anthropology, dance, human development, industrial efficiency, the performing arts, physical education, physical therapy, and psychology will be introduced. LAB
DANC 742 Laban Movement Observation, Analysis, and Notation (3). Two systems of symbolic movement notation will be used in this course: Rudolf Laban’s Effort/Shape Writing and his system of Labanotation. Several applications of Laban’s notational systems will be studied as they appear in cross-cultural, developmental, psychological, and sociological research. Emphasis will be placed on refining the student’s ability to perceive, describe, and notate human movement of all kinds from everyday gestures to highly trained movement skills. Prerequisite: DANC 740 or consent of instructor. LAB
DANC 780 Movement for Older Adults (3). This course is designed to increase knowledge and understanding of the movement problems experienced by older adults and to develop the student’s ability to create movement interventions to address these concerns. Prerequisite: Open to graduate students in any field of study. ETC
DANC 898 Directed Study in Dance (1-3). Directed study in some aspect of aesthetics, dance history, movement analysis, production, or an advanced creative project. Prerequisite: Consent of instructor. IND

Film and Media Studies

Chair: Tamara Falicov, tfalicov@ku.edu
Graduate Director: Michael Baskett, eiga@ku.edu
Oldfather Studios, 1621 W. 9th St.
Lawrence, KS 66044-2488, http://film.ku.edu
Professors: Berg, Small
Associate Professors: Baskett, Falicov, Jacobson, Lacy, Preston, Tibbetts, Willmott
Assistant Professor: Hurst

KU student-produced films and videos win awards at top international, national, and regional festivals.

KU’s film and media studies program incorporates a balanced curriculum of film-media studies (history, theory, and criticism) and production.

Admission

Submit your application online at www.grad.ku.edu. Send all other requested application materials to:

The University of Kansas
Department of Film and Media Studies
Oldfather Studios, 1621 W. 9th St.
Lawrence, KS 66044-2488

M.A. Degree Requirements

The Master of Arts in film and media is an academic degree, but students are expected to complete 6 hours in film and video production. All M.A. students must write a thesis as the culmination of the degree. To be admitted, a student ordinarily is expected to have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 4.5 (analytical writing). To complete the M.A., the student must sustain a grade-point average of 3.0 or higher through 33 graduate credit hours.

Requirements for the M.A. in Film and Media Studies (33 hours)

Core Courses. FMS 880 Introduction to Graduate Study in Film/Media (3). FMS 880 is to be taken the first semester in residence.

A. History and Theory

FMS 864 Classical Film and Media Theory (3)
FMS 865 Contemporary Film and Media Theory (3)

Production. Choose two courses from the following list:

FMS 673 Problems in Basic Screenwriting (3)
FMS 675 Problems in Basic Video Production (3)
FMS 676 Problems in Basic Film Production (3)

Area of Concentration. Choose 12 hours of courses from one of the following four categories:

A. History and Theory

FMS 841 Asian Film (3)
FMS 842 Latin American Film (3)
FMS 862 Survey of Film and Media History (3)
FMS 863 Survey of Documentary and Experimental Film and Media (3)

An appropriate FMS 902 Film Seminar in: (3)
One elective in film history or theory (3)

B. International Film and Media

FMS 841 Asian Film (3)
FMS 842 Latin American Film (3)
FMS 862 Survey of Film and Media History (3)

One elective chosen with the graduate adviser from the film culture sequences offered, for example, by French and Italian or African and African-American studies, or an appropriate FMS 902 Film Seminar in: (3)

C. Practical Criticism

FMS 621 American Film Criticism (3)
One elective from the FMS 880 sequence in American Popular Culture (3)

One elective from the following list:

FMS 841 Asian Film (3)
FMS 842 Latin American Film (3)
FMS 862 Survey of Film and Media History (3)
FMS 863 Survey of Documentary and Experimental Film and Media (3)

An appropriate FMS 902 Film Seminar in: (3)

D. Theory and Practice of Production

Two electives from the following list (6 hours):

FMS 576 Animation (3)
FMS 675 Problems in Basic Video Production (3)
FMS 676 Problems in Basic Film Production (3)
FMS 773 Problems in Intermediate Screenwriting (3)

Two electives from the following list (6 hours):

FMS 841 Asian Film (3)
FMS 842 Latin American Film (3)
FMS 862 Survey of Film and Media History (3)
FMS 863 Survey of Documentary and Experimental Film and Media (3)

Master’s Thesis. FMS 899 Master’s Thesis (6)

All courses should be selected in consultation with the adviser.
Ph.D. Degree Requirements

The Ph.D. is an academic degree, but students are expected to complete 6 hours in film and video production. To be admitted, a student ordinarily is expected to have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 4.5 (analytical writing). The applicants also must have a grade-point average of at least 3.2 for undergraduate and at least 3.5 for graduate work and a master’s degree acceptable to the graduate faculty. Deficiencies in background may require make-up work.

Ph.D. Degree in Film and Media Studies (60 hours not including language proficiency). Please meet with your adviser or graduate director each semester to assess your progress.

Core Requirements (24 hours). Doctoral students in film and media studies must take a core of courses aimed at strengthening methodological, historical, and theoretical grounding. One course must be taken in non-Western/indigenous film; two graduate-level production courses are required, and two courses in FMS 902 Film Seminar are mandatory.

Elective Requirements (9 hours). Elective courses focus on the academic study of history, international cinema, popular culture, and film criticism. These courses are selected with a graduate adviser to reflect the student’s special interest. The adviser may increase the number of hours, depending on the student’s academic needs.

Production Requirements (6 hours). Production courses give students an understanding of the production process in making film, video, or animation pieces. On graduation, doctoral students can perform as competent artisans in addition to research scholars. Production courses are selected with a graduate adviser to reflect the student’s special interest. The adviser may increase the number of hours, depending on the student’s academic needs.

Secondary Field Requirements (9 hours). Secondary field courses, 9 hours at the graduate level from outside the Department of Film and Media Studies, are chosen by the student to strengthen the dissertation. They are related to the student’s proposed area of specialization. Examples include English; history; women, gender, and sexuality studies; American studies; education; and social welfare.

Foreign Language or Other Research Skills Requirement. The student must demonstrate proficiency in one foreign language or competence for use as research skills in two foreign languages. For one of the languages under the second option, the student must demonstrate proficiency in one foreign language or competence for use as research skills in two foreign languages. For one of the languages under the second option, the student may substitute a research skill pertinent to the speciality (e.g., computer language, research methods, American Sign Language). Courses may be taken within or outside the department.

Comprehensive Examination. Two publishable papers are due at the time of the examination. The examination includes on-site written responses to questions in history, theory, production, and literature/criticism, followed by an oral examination.

Dissertation (18 hours). The finished dissertation must constitute a palpable contribution to knowledge in the candidate’s chosen field. The dissertation must constitute a contribution, theory, practice, and literature/criticism, followed by an oral examination.

Film & Media Studies Program of Study. Core (24 hours).

FMS 800 Introduction to Graduate Study in Film/Media 3
FMS 801 Professional Development Seminar (1 hour/three semesters) 3
FMS 882 Survey of Film and Media History 3
FMS 863 Survey of Contemporary and Experimental Film and Media 3
FMS 864 Classical Film and Media Theory 3
FMS 865 Contemporary Film and Media Theory 3
FMS 902 Film Seminar in: Special Topics 3
One graduate-level non-Western/indigenous film course 3
Electives (9 hours chosen in consultation with the adviser) 9
FMS 621 American Film Criticism 3
FMS 702 Graduate Seminar in: Film Studies 3
FMS 814 Development of African-American Images in Film 3
FMS 841 Asian Film 3
FMS 842 Latin American Film 3
FMS 880 Development of American Popular Culture of the: (3) 3
FMS 902 Film Seminar in: Special Topics (3) 3
FMS 998 Investigation and Conference (for Doctoral Students) 3
Others to be added from semester offerings at the graduate level
Production (6 hours) 6
FMS 576 Animation 3
FMS 673 Problems in Basic Screenwriting (3)
FMS 675 Problems in Basic Video Production (3)
FMS 676 Problems in Basic Film Production (3)
FMS 702 Graduate Seminar in: Production (3)
FMS 773 Problems in Intermediate Screenwriting (3)
FMS 775 Problems in Intermediate Video Production (3)
FMS 895 Intensive Film Project Seminar (3)
FMS 897 Practicum in Film (3)

Film and Media Studies Courses

FMS 530 Classical Film/Media Theory (3).
FMS 531 Contemporary Film/Media Theory (3).
FMS 540 Cuban Cinema (3).
FMS 541 Asian Film (3). NW
FMS 542 Latin American Film (3).

FMS 543 Contemporary Japanese Film (3). NW
FMS 544 African Film and Video (3). NW
FMS 557 Animation (3).
FMS 592 Documentary Film and Video (3)
FMS 593 Experimental Film and Video (3)
FMS 620 International Women Filmmakers (3).
FMS 621 American Film Criticism (3).
FMS 673 Problems in Basic Screenwriting (3).
FMS 675 Problems in Basic Video Production (3).
FMS 676 Problems in Basic Film Production (3).
FMS 702 Graduate Seminar in: (3). Course organized any given semester to study particular subject matter to take advantage of special competency by an individual faculty member. Topics change as needs and resources develop. Class discussion, readings, and individual projects.

FMS 704 Study Abroad Topics in: (1-6). This course is designed for the study of special topics in Film. Credit for course work must be arranged through the Office of KU Study Abroad. May be repeated for credit if content varies.

FMS 707 Film/Media Internship (3-12). Study with an approved film or media company. Emphasis may be in one or all of the following areas: acting, directing, or promotion management. No more than six hours may be applied to an M.A. degree. Course will be graded satisfactory/unsatisfactory. Prerequisite: Consent of instructor. FLDO

FMS 714 Kansas Art and Popular Culture (3). An overview of the art and cultural history of Kansas (and Kansas City) from territorial days to the present. Emphasis is placed on key issues, figures and events. A general familiarity with American history is recommended.

FMS 715 Survey of Japanese Film (3). This course surveys the major developments in and critical approaches to twentieth-century Japanese film. Focusing mostly on narratives, the Survey of Japanese Film introduces students to basic methodological issues in Japanese film history—especially questions of narrative, genre, star, and authorship. We examine Japanese cinema as an institution located within specific contexts while focusing on the ways in which this institution shapes gender, race, class, ethnic and national identities. This course examines how patterns of distribution, exhibition, as well as of reception influence film aesthetics and film style over the last century. Through secondary readings, lectures, and discussions students will critically examine how Japanese cinema as an institution both responds to and intervenes in the social, cultural, and political history of twentieth-century Japan. In addition to the lecture sessions taught in tandem with FMS 315, additional research component, lecture presentation, and class meeting are also required.

FMS 716 Cinemas of the Southern Cone: Argentina, Chile, and Uruguay (3). This course will examine the cinemas of three neighboring South American countries to find similar themes and some differences between them historically, politically, and culturally. Themes will include: gender and nation, political repression during dictatorship, globalization and the cinema, youth culture in the Southern Cone, and representations of race and ethnicity, immigration and identity in contemporary cinema. Other themes in common are financing issues, such as co-production agreements, film production under the regime, Marcel Marceau and issues of circulation, distribution and marketing of national films. Most films will be feature length narrative, but a few documentaries will be shown. In addition to the lecture sessions taught in tandem with FMS 316, additional research component, lecture presentation, and class meeting are also required.

FMS 743 Contemporary Japanese Film (3). Seminar on the major developments in the cinema of Japan (1900-present). Film industry examining how filmmaking practices and film criticism have been influenced by such issues as transnationalism, postcolonialism, critical race theory, postmodernism, and new media. We will survey recent industrial and stylistic trends as well as key critical debates.

FMS 744 African Film and Video (3). The principles of screenwriting are developed through stage writing and analysis culminating in the writing and structure of a full-length, three act screenplay. In addition to the class sessions taught with FMS 373 Intermediate Screenwriting, separate consultations and specific research assignments for graduate students in FMS 744 are also required.

FMS 753 Documentary Film and Video (3). Theory and practice of multiple-camera video production with emphasis on preproduction planning, scripting, directing, lighting, camera operation, and audio. In addition to the class sessions taught with FMS 373 Intermediate Video Production, separate consultations and specific research assignments for graduate students in FMS 753 are also required.

FMS 755 Animation (3). Advanced creative projects which may be elected by master’s degree candidates in lieu of thesis. RSH

FMS 757 Problems in Intermediate Screenwriting (3). The principles of screenwriting are developed through stage writing and analysis culminating in the writing and structure of a full-length, three act screenplay. In addition to the class sessions taught with FMS 373 Intermediate Screenwriting, separate consultations and specific research assignments for graduate students in FMS 757 are also required.

FMS 800 Introduction to Graduate Study in Film/Media (3). Major emphasis is placed upon the principles of research, bibliographical data, and research methods useful in film and television. The course should be taken at the beginning of the graduate student’s program.

FMS 801 Professional Development Seminar (1). Preparation for faculty careers in film and related fields, including issues of research, teaching, and service. Specific topics and emphases vary from semester to semester. May be repeated for credit.

FMS 802 Master’s Projects (3-4). Advanced creative projects which may be elected by master’s degree candidates in lieu of thesis.

FMS 810 Development of the Silent Film (3). Intensive study of the artistic, economic, and sociological development of the silent narrative film with emphasis on the evolution of the American studio system, German Expressionism, and Soviet Expressionist Realism. LEC
FMS 811 Development of the American Sound Film (3). Intensive study of the artistic, economic, and sociological development of the American sound film with emphasis on the studio system, major directors, genres, and the impact of television. LEC

FMS 813 Development of the International Sound Film (3). Intensive study of the artistic, economic, and sociological development of the international sound film with emphasis on the cinemas of England, France, Italy, Germany, Sweden, and Eastern Europe. LEC

FMS 814 Development of African-American Images in Film (3). A history and critical assessment of the development of diverse images of African-Americans in American cinema and the impact of those images of American society. Screenings of feature and independent films, including those by African-Americans. In addition to the lecture/screening sessions taught in tandem with FMS 314, a separate discussion section and specific research assignments for graduate students enrolled in FMS 814 are also required. LEC

FMS 842 Asian Film (3). Seminar on various national film cultures of East and Southeast Asia. Representative films are studied from formal, stylistic, and socio-historical perspectives. Addresses the impact of key cultural, economic and political issues on each film industry. Class discussion, reports, and individual research papers. SEM

FMS 842 Latin American Film (3). The course explores the national cinemas and film industries of various nations in Latin America, as well as films made by indigenious and Chichano/a filmmakers. Films are analyzed both as artistic works (formal qualities, cinematic styles, and influences) and as documents that provide windows to the socio-historical context of the nation. The course focuses on the political-economic factors surrounding the production of Latin American national cinema (the role of the state, co-productions, film markets). LEC

FMS 862 Survey of Film and Media History (3). This seminar will be primarily international in scope and will concentrate on the following: technological and production issues relating to the transition in 1927-1931 to silent sound film; the constructions of national identity, including those of recently emerging cultures; a comparison and contrast of the censorial agencies in America and abroad; and current research paradigms and theories on reception and media history. LEC

FMS 863 Survey of Documentary and Experimental Film and Media (3). Surveys the important historical and theoretical issues pertinent to both the documentary and experimental approaches as expressed in film, video and new technologies. Includes major documentary and experimental genres, directors, national schools, artistic movements, and landmark works. Screenings reflect a chronology from origins to present-day. LEC

FMS 864 Classical Film and Media Theory (3). This seminar is a comprehensive survey of the major classical film and media theories and theorists, such as Munsterberg, Eisenstein, ArNeill, Bazin, Adorno. Organized around specific questions, eg: What qualities differentiate film and media from other art and communication forms? What qualities do film and media share with other art and communication forms? What qualities differentiate film from other forms of media such as television? Readings from the above-listed class discussion, individual research papers. SEM

FMS 865 Contemporary Film and Media Theory (3). This seminar is a study of the theories applied to the study of film and media since the 1970s moving through structuralism, and into the post: -structuralism, -modernism, -colonialism, and beyond. Within these broad paradigms some of the theories examined in depth are cinesemiotics, Marxism, cinematic apparatus, feminist film theory, reception theory, new media and virtual reality. SEM

FMS 875 Problems in Advanced Video Production (3). Special projects in video production using both studio and remote locations. In addition to the class sessions taught with FMS 475 Advanced Video Production, separate consultations and specific research assignments for graduate students in FMS 875 are also required. Prerequisite: FMS 775 or consent of instructor. LEC

FMS 880 Development of American Popular Culture of the:_____ (3). Intensive interdisciplinary investigation of popular culture forms and their relationships with the social, political, and economic dynamics of America in a specific decade, with emphasis on film, broadcasting, theatre, music literature (including magazines and newspapers), and the graphic arts. Decade to be studied changes as resources and needs develop. LEC

FMS 887 Film and the Public (3). A study of the actual and implied responsibilities of film and video to the public, as seen in regulations, self-regulatory codes, and the critical literature of the field. Prerequisite: Consent of instructor. LEC

FMS 888 Special Problems in Film History and Criticism (1-4). RSH

FMS 894 Seminar for Film Interns (1-3). To be taken concurrently with graduate internships or employment with an approved film or video production company. Discussion and critical evaluation of work experience with faculty adviser and job supervisor. Prerequisite: Consent of Theatre and Film graduate faculty. RSH

FMS 895 Intensive Film Project Seminar (1-4). The student plans and executes an intensive special project which requires the professional skills of investigation and performance appropriate to radio, television and/or film. May be repeated for credit up to a maximum of six credit hours. (This seminar is to the special project program what “thesis” is to the traditional program.) RSH

FMS 897 Practicum in Film (1-3). Various approaches to the illustration of principles of production in film and/or video through the supervision of laboratory exercises and subsequent evaluation by the Theatre and Film graduate faculty. FLD

FMS 898 Investigation and Conference (for Master’s Students) (1-8). Directed research and experimentation in film or media. Limited to eight hours credit toward the Master’s degree. RSH

FMS 899 Master’s Thesis (1-6). RSH

FMS 902 Film Seminar in:_____ (3). A graduate seminar devoted to selected historical, theoretical, or critical issues. Prerequisite: Consent of instructor. LEC

FMS 905 Investigation and Conference (for Doctoral Students) (1-8). RSH

FMS 999 Doctoral Dissertation (1-12). RSH

Film & Media Studies | Theatre

Theatre

Chair: John Stanjunius, stanj@ku.edu
Director of Graduate Studies: Henry Bial, tfdleg@ku.edu
Murphy Hall, 1530 Naismith Drive, Room 356
Lawrence, KS 66045-3103, http://theatre.ku.edu, (785) 864-3511

Professors: Gronbeck-Tedesco, Meier, Reaney, Unruh, Wright
Professors Emeriti: Davis, Kuhlke, Willis
Associate Professors: Aiyaj-Soynika, Bial, Christilles, Klein, Leon, Ringer, Staniunas
Assistant Professors: Bennett, Hodges Persley, Rovit

FSCB: School of the Arts

Admission

Submit your application online at www.graduate.ku.edu. Send all other requested application materials to:

The University of Kansas
Department of Theatre and Film
Murphy Hall, 1530 Naismith Drive, Room 356
Lawrence, KS 66045-3103

M.A. Degree Requirements

The Master of Arts in theatre is an academic degree, but students are expected to complete 6 hours in theatrical production. All M.A. students must write a thesis as the culmination of the degree. To be admitted, a student ordinarily is expected to have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 4.5 (analytical writing). To complete the M.A., the student must sustain a grade-point average of 3.0 or higher through 33 graduate credit hours.

Requirements for the M.A. in Theatre (33 hours)

Core Requirement. THR 800 Introduction to Graduate Study in Theatre ............... 3

The student is assigned a faculty advisor. This course is a seminar in which the student is introduced to the resources and opportunities of the graduate program and is assigned a research advisor for the thesis. Class discussion, individual research papers. SEM

In consultation with an advisor, students choose from among departmental courses in theatre history, dramatic literature, theory, and criticism ............. 6

Production. Choose two courses in either directing or scenography ....................... 6

A. Directing

THR 609 Play Directing (3)
THR 715 Problems and Techniques of Direction (3)
THR 518 Advanced Play Production (3)

B. Scenography

THR 516 Scenic Painting Techniques (3)
THR 517 Computer-aided Design (3)
THR 518 Scenography and the Classic Script (3)
THR 519 Scenography and the Modern Script (3)
THR 618 Scenography and the Musical Theatre (3)
THR 619 Scenography and the Contemporary Script (3)
THR 620 Scenography and the Experimental Production (3)

General Theatre Studies. Fifteen hours of courses from graduate offerings in theatre history, dramatic literature, history and criticism: ........................................... 15

Of these 15 hours, up to 6 may be graduate courses from other areas such as film and media studies; child psychology; American studies; African and African-American studies; women, gender, and sexuality studies; developmental psychology; English; and pertinent offerings from language and culture programs.

Completion of the Degree. An oral examination structured around a thesis based on scholarly and/or creative research:

THR 899 Master’s Thesis ....................................................... 3

All courses should be selected in consultation with the adviser.

Master of Fine Arts in Design with a Concentration in Scenography Degree Requirements

The Master of Fine Arts in scenography is the terminal degree for people specializing in theatrical design at KU. The program requires the student to plan and realize production design. Candidates may expect to design some or all aspects of at least four productions during the program. In addition to an intensive concentration in design, the program includes courses in studio art, theory, and history of art.

To be admitted, a student must have a cumulative undergraduate grade-point average of at least 3.0 on a 4.0 scale and submit a design portfolio with work record and three letters of recommendation. To complete the M.F.A., the student must sustain a
grade-point average of 3.0 or higher through 60 graduate credit hours. The following guidelines govern the distribution of hours:

**Core Requirement**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSC 720 Directed Reading in Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 518 Scenography and the Classic Script</td>
<td>3</td>
</tr>
<tr>
<td>THR 519 Scenography and the Modern Script</td>
<td>3</td>
</tr>
<tr>
<td>THR 618 Scenography and the Musical Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THR 619 Scenography and the Contemporary Script</td>
<td>3</td>
</tr>
<tr>
<td>THR 620 Scenography and the Experimental Production</td>
<td>3</td>
</tr>
<tr>
<td>THR 719 M.F.A. Production Seminar</td>
<td>6</td>
</tr>
<tr>
<td>THR 840 Professional Development Seminar</td>
<td>1</td>
</tr>
<tr>
<td>THR 802 Master’s Projects</td>
<td>6</td>
</tr>
<tr>
<td>THR 819 Advanced M.F.A. Production Seminar</td>
<td>6</td>
</tr>
<tr>
<td>THR 898 Investigative Conference (for Master’s Students)</td>
<td>6</td>
</tr>
<tr>
<td>THR 899 Master’s Thesis</td>
<td>2</td>
</tr>
</tbody>
</table>

Electives: no limit, but a minimum of 15 hours for a total of 60 hours.

**Ph.D. Degree Requirements**

The Ph.D. is an academic degree, but students must demonstrate competence in at least one production area. To be admitted, a student ordinarily is expected to have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 4.5 (analytical writing). The applicant also must have a grade-point average of at least 3.2 for undergraduate and at least 3.5 for graduate work, and a master’s degree acceptable to the graduate faculty. Deficiencies in background may require make-up work.

**Ph.D. in Theatre.** Applicants must hold the M.A. or M.F.A. in theatre or a related field. Make-up work normally does not count toward the Ph.D. In extraordinary circumstances, the faculty may award credit toward the Ph.D. for a limited amount of M.A. or Ph.D. course work completed elsewhere.

**Core Requirements** (12 hours). In consultation with an adviser, students choose from departmental courses in theatre history, dramatic literature, theory, and criticism.

**Elective Requirements** (9 hours). Elective courses focus on the academic study of theatre (playwriting, directing, etc.), theatre theory, and related methodologies. Courses are selected with a graduate adviser to reflect the student’s special interest. Some courses may be taken outside theatre, for example in film and media studies, English, American studies, African and African-American studies, and history.

**Secondary Field Requirements** (9 hours). Students choose 9 hours at the graduate level from outside the department to assist them in writing the dissertation. Courses are related to the student’s proposed specialization. (See examples under Elective Requirements.)

**Production Courses** (6 hours). To become competent artists as well as developing research scholars, students choose a sequence of graduate courses in either scenography or directing.

**Foreign Language or Other Research Skills Requirement.** The student must demonstrate (1) proficiency in one foreign language or (2) competence in two foreign languages. For one of the languages under the second option, the student must also demonstrate a specific skill pertinent to the specialty (e.g., computer language, American Sign Language). The student must demonstrate competence in a foreign language or demonstrate proficiency in the use of a foreign language.

**Comprehensive Examination** (6 hours). The comprehensive examination is an essential element of the doctoral program, providing an opportunity for students to focus and consolidate the diverse strands of their graduate course work, to demonstrate competence for teaching in particular subject areas, and to establish a strong foundation for moving on to the dissertation. It consists of three parts: 1) A written examination, which covers four or five areas of expertise. Ordinarily, each area corresponds to a member of the student’s committee. 2) Submission of two publishable papers of article length (5,000 to 8,000 words) that demonstrate the student’s ability to research and write original scholarship at a level appropriate to the field. Publishable papers must be submitted on the first day of the examination. 3) An oral examination, given two to four weeks after the written examination. The oral examination lasts about 90 minutes and may revisit material covered in the written examination, the publishable papers, and/or other material as deemed appropriate by the committee. While preparing for the examination, students may enroll twice in THR 998 Investigation and Conference (for Doctoral Students).

**Dissertation** (18 hours). The dissertation is expected to take the form of a book-length scholarly study that shows the results of original research and scholarly creativity. After its completion, an oral defense must be held no less than four weeks before the graduation deadline. The committee consists of one chair, three departmental members, and an outside member.

Normally the Ph.D. requires 60 hours not including FLORS requirements. All courses must be chosen in consultation with an adviser.

### Theatre Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 501 Colloquium on American Theatre</td>
<td>(1)</td>
</tr>
<tr>
<td>THR 506 Acting for the Camera</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 508 Fundamentals of Directing</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 509 Dramatic Script Writing</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 512 A Vocal Approach to the Classics</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 516 Scenic Painting Techniques</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 517 Computer-Aided Design</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 518 Scenography and the Classic Script</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 519 Scenography and the Modern Script</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 520 History of Period Style I</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 521 History of Period Style II</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 525 History of Theatre</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 526 History of Theatre II</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 527 Asian Theatre and Performance</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 528 History of U.S. Theatre and Drama</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 529 Race and the American Theatre</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 550 Applied and Interactive Theatre</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 599 Special Topics in Scenography</td>
<td>(1-6)</td>
</tr>
<tr>
<td>THR 603 Theatre for Young Audiences</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 604 Drama with Young People</td>
<td>(1-3)</td>
</tr>
<tr>
<td>THR 609 Play Directing</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 617 Computer-Aided Design II</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 618 Scenography and the Musical Theatre</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 619 Scenography and the Contemporary Script</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 620 Scenography and the Experimental Production</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 626 Myth and the Dramatist</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 702 Graduate Seminar in: _____</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 703 Readings in Dramatic Literature</td>
<td>(1-3)</td>
</tr>
<tr>
<td>THR 704 Study Abroad Topics in: _____</td>
<td>(1-6)</td>
</tr>
<tr>
<td>THR 709 Advanced Dramatic Script Writing</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 711 Styles of Acting: Shakespearean</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 713 Styles of Acting: Restoration and 18th-Century English</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 715 Problems and Techniques of Direction</td>
<td>(3)</td>
</tr>
<tr>
<td>THR 719 M.F.A. Production Seminar</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Three theatres in Murphy Hall provide unique performance spaces: Crafton Preyer Theatre, a proscenium house seating 1,100; the more intimate William Inge Theatre, which seats 100; and an adaptable space called Stage Tool, which seats 300.

KU’s graduate program in theatre is ranked 23rd in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.
to be mounted on one of our stages. Weekly critique and discussion of solutions to practical design problems from conception through execution. May be repeated for a total of no more than six hours credit. Prerequisite: Consent of instructor. LEC

THR 725 Russian Theatre and Drama from Stanislavsky and Chekhov to the Present (3). A study of the development of Russian theatre and dramatic literature from 1898 to the present. Emphasis on plays and readings in English. (Same as SLAV 562.) LEC

THR 800 Introduction to Graduate Study in Theatre (3). Major emphasis is placed upon the principles of research, bibliographical data, and research methods useful in theatre and performance studies. The course should be taken at the beginning of the graduate student's program. LEC

THR 801 Professional Development Seminar (1). Preparation for faculty careers in theatre and related fields, including issues of research, teaching, and service. Specific topics and emphases vary from semester to semester. May be repeated for credit. RSH

THR 802 Master's Projects (3-6). Advanced creative projects which may be elected by master's degree candidates in lieu of thesis. RSH

THR 803 Summer Theatre: Graduate (1-3). Provides graduate level experience in a wide range of theatre activity related to the summer theatre production or productions. Work may include activity in the following areas: acting, directing, design, technical theatre, voice and/or movement. Specialized skills are developed through individual classes, production preparation, and performance. Prerequisite: Consent of instructor. FLD

THR 815 Advanced Play Production (1-3). Individually supervised directing of theatre pieces for public presentation. In special cases credit may be given for musical direction, choreography, or stage management. Prerequisite: THR 715. FLD

THR 817 Theory of Acting and Directing (3). Readings, lectures, discussions and papers on acting and directing theory; is concerned with the divergence between presentational and representational acting methods and the emergence of directing art. Prerequisite: THR 609 or THR 715. LEC

THR 819 Advanced M.F.A. Production Seminar (3). Continuation of THR 719. May be repeated for maximum of six hours credit. Prerequisite: Six hours of THR 719 and consent of instructor. LEC

THR 826 Seminar in African Theatre (3). A study of developments in African theatre in the 20th Century focusing on themes, concepts, styles, and critical perspectives. The course will investigate the idea of an “African theatre” and identity different periods and movements within national and international contexts. The analysis of representative works and authors will be grounded within appropriate theoretical frameworks. LEC

THR 828 Seminar in American Theatre and Drama to 1895 (3). Intensive investigation of selected topics. Individual study emphasized. LEC

THR 829 Seminar in American Theatre and Drama from 1895 to Present (3). Intensive investigation of selected topics. Individual study emphasized. LEC

THR 896 Investigation and Conference (for Master's Students) (1-4). Directed research and experimentation in theatre. Limited to eight hours credit toward the Master’s degree. RSH

THR 899 Master's Thesis (1-6). THE

THR 901 Theatre Seminar in: ______ (3). A graduate seminar devoted to selected historical, theoretical, or critical issues in theatre. Prerequisite: Consent of instructor. LEC

THR 915 Modern Theatre and Drama (3). A study of the movements in playwriting and theatrical production in Europe and America from the mid-19th century to World War II. Prerequisite: THR 525 and THR 526 or comparable courses. LEC

THR 916 Postmodern Theatre and Drama (3). A study of developments in Europe and American playwriting, directing, acting, and design from World War II to the present. Prerequisite: THR 525 and THR 526, or comparable courses, and preferably THR 915. SEM

THR 917 Dramatic Theory I (3). A survey of dramatic theory from Plato to Lessing. LEC

THR 918 Dramatic Theory II (3). A survey of dramatic theory from Lessing to Langer. LEC

THR 919 Dramatic Theory Seminar (3). Study in depth of selected theorists. Offered as determined by faculty availability and student interest. LEC

THR 920 Practicum in Criticism (3). Contemporary approaches to theatre and drama criticism. Emphasis on actual practice, using a variety of critical methods. FLD

THR 922 Theatre Historiography (3). This course focuses on the advanced study of research methods, subjects, interpretative paradigms, theoretical frameworks, and philosophies of history employed in contemporary approaches to writing and teaching theatre history. Prerequisite: THR 525 and THR 526 or equivalent. LEC

THR 998 Investigation and Conference (for Doctoral Students) (1-8). RSH

THR 999 Doctoral Dissertation (1-12). THE

Associate Professors: Akers, Asbury, Brackett, Bowman, Dishinger, Hackmeister, Hartman, Krueger, Nam, Velasco, Vertacnik, Westergard

Associate Professors Emeriti: Blackhurst, Burnham, Price, Wright

Assistant Professors: Bitters, Burke, Park

Admission

By permission of the Kansas Board of Regents, application for admission to graduate programs in the Department of Visual Art may be refused if available instructional space does not allow addition of more students. The quota of new Master of Fine Arts students who can be accepted into these programs is sometimes filled by February 1.

To be admitted, students whose majors are in art and/or design must have undergraduate backgrounds judged by the graduate faculty to be appropriate preparation for the specific specialization selected for graduate study.

Departmental faculty selection and review committees evaluate each applicant’s transcripts, portfolios, and letters of recommendation to determine their qualifications for admission. The committees expect applicants to have the B.F.A. degree or equivalent experience. In general, committees expect applicants to present about 70 hours of undergraduate credit in studio or related professional courses including about 36 hours of studio credit in a major area, to have maintained an undergraduate overall grade-point average of 3.0 on a 4.0 scale and in the proposed major, and to have had a minimum of 9 hours of credit in art history. The department encourages full-time residence.

Submit your application and fee online to Graduate Studies at www.graduate.ku.edu. Send one official transcript of all college and university course work, statement of purpose, three letters of recommendation (online letters can be submitted to Graduate Studies), digital portfolio, printed image index, the application form for financial aid, statement of financial resources (international students) and proof of proficiency in English (international students) to:

The University of Kansas
Department of Visual Art, Director of Graduate Studies
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531

Master of Fine Arts in Art Degree Requirements

Concentrations in Expanded Media, Drawing and Painting, Printmaking, and Sculpture. The graduate program consists of 60 semester hours of graduate credit, including thesis exhibition, in courses approved by the graduate director and the graduate thesis committee. A student may concentrate in one or more specializations. When the student has completed 24 hours, the faculty selection and review committee reviews the student’s work. The graduate director gives the student a written assessment of progress, signed by the committee. At the end of the next semester, the same committee conducts a thesis review that determines whether the student is prepared to begin thesis work, extends additional course work, or is to be dropped from the program. Upon approval by the review committee, the candidate begins work toward the thesis. Students not receiving approval may continue to work toward the next review unless denied by the committee. A student who is approved for thesis work may enroll in Thesis in Art after completing 36 credit hours. Before thesis enrollment, the student selects a graduate thesis committee consisting of three members of the graduate art faculty. The committee advises the student, conducts regularly scheduled reviews of the work, and determines whether the requirements for the thesis have been completed. The graduate director must approve the membership of the graduate thesis committee.

Visual Art

Chair: Dawn Guernsey, guernsey@ku.edu
Graduate Director: Gina Westergard, adgrad@ku.edu
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531
www.clas.ku.edu, (785) 864-4401, Fax: (785)-864-4404

Professors: Carter, Guernsey, Havener, M.A. Jordan, Katz, Lubensky, McCrea, Stanionis, Swindell

Professors Emeriti: Gee, Green, Schira, Shimomura, Sudlow, Tefft, Thompson
The final departmental requirements are a thesis exhibition of the student’s work, an oral examination, and a thesis folio of the exhibition. The thesis folio includes a statement written by the student concerning the work and a visual record of the exhibition. The department reserves the option of selecting and retaining one example of each graduate student’s work. Upon enrolling, the student automatically accepts these requirements and conditions.

**Required Courses** (60 credit hours)

- **Seminar**
- **Directed study**
- **Art department electives**
- **Studio or general electives**
- **Graduate-level academic electives**
- **Thesis**

### Art Courses

**ART 500 Special Topics in Art:**

- **ART 540 Professional Activities Seminar**
- **ART 575 Directed Reading in Art**
- **ART 598 Special Topics: Studio Theory and Criticism**
- **ART 599 Special Problems in Art**
- **ART 695 Directed Study I**
- **ART 696 Directed Study II**
- **ART 801 Directed Study III**
- **ART 802 Directed Study IV**
- **ART 803 Directed Study V**
- **ART 805 Graduate Studio**
- **ART 810 Principles and Practice of Studio Teaching**
- **ART 889 Special Topics: Studio Theory and Criticism**
- **ART 899 Graduate Seminar**
- **ART 906 Graduate Studio**
- **ART 950 Thesis in Art**

### Drawing Courses

**DRWG 505 Drawing V**

**DRWG 506 Drawing VI**

**DRWG 515 Life Drawing III**

**DRWG 516 Life Drawing IV**

**DRWG 518 Life Drawing III, Honors**

**DRWG 519 Life Drawing IV, Honors**

**DRWG 535 Special Topics in Drawing**

**DRWG 807 Drawing VII**

**DRWG 817 Life Drawing V**

**DRWG 908 Drawing VIII**

**DRWG 918 Life Drawing VI**

### Expanded Media Courses

**EXM 501 The Digital Image II**

**EXM 503 Intermediate Media II**

**EXM 535 Expanded Media III**

**EXM 536 Expanded Media III, Honors**

**EXM 537 Expanded Media IV**

**EXM 538 Expanded Media IV, Honors**

**EXM 539 Special Problems, Expanded Media**

**EXM 541 Graduate Performance Art**

**EXM 542 Graduate Installation Art**

**EXM 543 Graduate: The Digital Image**

**EXM 545 Graduate Intermedia**

**EXM 546 Graduate Expanded Media V**

**EXM 846 Graduate Expanded Media VI**

### Printmaking Courses

**PRNT 505 Painting III**

**PRNT 566 Painting IV**

**PRNT 567 Painting III, Honors**

**PRNT 568 Special Topics in Painting**

**PRNT 569 Painting IV, Honors**

**PRNT 585 The Figure I**

**PRNT 586 The Figure II**

**PRNT 588 The Figure I, Honors**

**PRNT 589 The Figure II, Honors**

**PRNT 667 Painting V**

**PRNT 668 Painting VI**

**PRNT 687 The Figure III**

**PRNT 688 The Figure IV**

**PRNT 869 Painting VII**

**PRNT 889 The Figure V**

**PRNT 970 Painting VIII**

**PRNT 990 The Figure VI**

**PRNT 991 Thesis in Printmaking**

**PRNT 992 Printmaking VIII**

### Printmaking Courses

**PRNT 523 Printmaking III A (Intaglio)**

**PRNT 524 Printmaking III B (Lithography)**

**PRNT 525 Printmaking III C (Serigraphy)**

**PRNT 526 Printmaking IV A (Intaglio)**

**PRNT 527 Printmaking IV B (Lithography)**

**PRNT 528 Printmaking IV C (Serigraphy)**

**PRNT 579 Special Problems in Printmaking**

**PRNT 662 Printmaking V**

**PRNT 663 Printmaking VI**

**PRNT 802 Special Problems in Printmaking**

**PRNT 827 Printmaking VII**

**PRNT 903 Special Problems in Printmaking**

**PRNT 928 Printmaking VIII**

KU’s Spencer Museum of Art is open from 10 a.m. to 4 p.m. Tuesday, Wednesday, Friday, and Saturday; from 10 a.m. to 8 p.m. Thursday; and from noon to 4 p.m. Sunday. Closed Monday.

Master of Fine Arts in Design Degree Requirements

Concentrations in Ceramics, Metalsmithing and Jewelry, and Textile Design. The program consists of 60 credit hours, including a thesis exhibition. Courses must be approved by the department and by the graduate faculty committee. A student may concentrate on one or more specializations. Students seeking the M.F.A. in design participate in a first-year review and a second-year review before beginning thesis work. The student must pass each review level to take course work applicable to the next level. Failure to pass a review results in termination of study.

A typical program in design includes:

Graduate seminar in design .......................................................... 4-6
Directed reading in design .......................................................... 3
Area concentration ....................................................................... 24
Graduate-level academic electives (Art history including H.A. 706 Seminar on Special Problems in Art History: Philosophy of Art, architecture, design history, or other graduate-level academic courses) .............................................. 9
Electives ...................................................................................... 9
Thesis ....................................................................................... 9-11

The final departmental requirements include a thesis exhibition of the student’s work and a catalog of the exhibition. The catalog must include a statement about the work with particular relevance to the exhibit and a visual record of the exhibition. An oral examination covering the exhibition is required.

Advanced Design Studies Courses

ADSC 560 Topics in Design .......................................................... (1-3)
ADSC 580 Special Problems in Design (1-6)
ADSC 722 Crafts Area Graduate Critique/Seminar (1). Group critique of individual research/artwork and discussion of professional practices and contemporary issues in crafts and art. Open to all craft area graduate students. Repeat for credit to a maximum of six credit hours. Graded satisfactory/unsatisfactory. LEC
ADSC 730 Directed Reading in Design (1-3). Research reading and presentation of reports on specific subjects related to the students major area of specialization. Required of all graduate students. RSH
ADSC 740 Special Problems in Design (1-6). An in-depth study of current problems in design or crafts with an emphasis on research. Special problems proposals must be discussed with and approved by the instructor and graduate adviser prior to enrollment in the course. RSH
ADSC 810 Orientation Seminar (1). Studies directed to development of a thesis plan. Required of all graduate students. Offered in fall semester only. Graded S or F. LEC
ADSC 850 Studio Teaching Practice (1). Graduate students only. Must hold an assistant instructor or teaching appointment. Credit earned does not satisfy any credit requirement for a degree. Graded S or U. FLD
ADSC 890 Thesis (1-8). For guidance refer to Design department graduate guidelines. THE

Ceramics Courses

CER 504 Kilns (3)
CER 505 Clay and Glaze Formulation (3)
CER 506 Production (6)
CER 715 Ceramics (2-6). Individual research. Prerequisite: CER 515 or equivalent. RSH
CER 725 Glass (2-6). Individual research. Prerequisite: Approval of instructor. RSH
CER 815 Ceramics (2-6). Continuation of CER 805. RSH
CER 825 Glass (2-6). Individual research. Prerequisite: Approval of instructor. RSH

Metalsmithing/Jewelry Courses

METL 501 Seminar (3)
METL 515 Advanced Metals (6)
METL 715 Metals/Jewelry (2-6). Individual research. Prerequisite: METL 515 or equivalent. RSH
METL 815 Metals/Jewelry (2-6). Continuation of METL 715. RSH

Textile Design Courses

TD 504 History of Textiles, Lecture (3)
TD 515 Senior Studio I (3-6)
TD 520 Senior Studio II (3-6)
TD 715 Textile Design in Weaving, Printing, and Dyeing (2-6). Individual research. Prerequisite: TD 520 or TD 525 or equivalent. RSH
TD 750 Graduate Seminar (0.5). Discussion of issues and/or work in textiles. Graded on satisfactory/unsatisfactory basis. LEC
TD 815 Textile Design in Weaving, Printing, and Dyeing (2-6). Continuation of TD 715. RSH

M.F.A. in Design with a Concentration in Scenography Degree Requirements

See Theatre in this chapter.

Master of Arts in Visual Art Education

Division Director: Denise Stone
Graduate Director: Gina Westergard
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531, (785) 864-4401
Associate Professors: Kowalchuk, Stone

The graduate program includes advanced professional and scholarly study for art educators and an initial certification program for those with baccalaureate degrees in other fields who wish to enter art education (initial certification study typically also requires collateral undergraduate study) and advanced study for individuals in related disciplines. Details may be found in the visual art education M.A. handbook, available from the Department of Visual Art or at www.clas.ku.edu.

Admission. Admission requirements for regular status:

1. Admission requires a bachelor’s degree from an accredited institution that encompasses a minimum of 40 semester hours in fine arts studio (courses in drawing, painting, sculpture, design, printmaking, ceramics, metalsmithing/jewelry, weaving, lettering, commercial art, graphic design, constructive design, etc.), 9 hours in history of art, and 8 hours in visual art education. Applicants must have an overall undergraduate grade-point average of at least 3.0 on a 4-point scale.

2. One official transcript.

3. A minimum of three letters of recommendation from former or current instructors and/or those able to recommend the applicant on the basis of professional experience (i.e., principals, supervisors, or former employers). The letters of recommendation must address the applicant’s potential to take initiative as a graduate student and ability to be a self-starter.


Send one official transcript of all college and university course work, graduate student information questionnaire (available at www.clas.ku.edu), three letters of recommendation (online letters can be submitted to Graduate Studies), statement of financial resources (international students), and proof of proficiency in English (international students) to

The University of Kansas
Visual Art Education, Director of Graduate Studies
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531

M.A. Degree Requirements. At least 15 and no more than 18 hours in visual art education are required. The remainder of the
course work can be in related fields such as history of art, education, psychology, etc. This emphasis is appropriate for the student desiring to improve his or her fine arts knowledge and research skills in art education.

**Thesis Option.** The student completes 9 credit hours of core courses (VAE 800, VAE 869, and VAE 875), additional elective hours, and an independent experimental, descriptive, historical, or philosophical investigation of a topic related to visual art education. A total of 30 credit hours is required.

**Project Option.** The student completes 9 credit hours of core courses (VAE 800, VAE 869, and VAE 875), and additional elective hours. A substantial application of theory, principles, and/or products of visual art education in a pedagogical setting must be documented. A total of 30 credit hours is required.

**Examination Option.** Students take a total of 37 credit hours in required core courses (including VAE 875 Research in Art Education) and elective courses with 36 credit hours in regularly scheduled classes. Students also take a 1-credit-hour course, VAE 890 Preparation for the M.A. Examination, devoted to preparing and completing a written and oral final examination. The examination requires students to demonstrate their knowledge of current issues in the field.

**Graduate Licensure in Art Education.** Students who seek to be art teachers in the public schools PreK-12 may obtain licensure as part of the master’s degree. The licensure track is for individuals with especially strong academic and artistic backgrounds who have completed bachelor’s degrees in studio art, design, art history, or other art-related fields. Course work is taken at the undergraduate and graduate levels. On completion, individuals are recommended by the university for PreK-12 art licensure in Kansas and have earned a significant amount of credit required for the M.A. in art education. Prospective students must meet all application requirements for the master’s degree to be considered for licensure in art. For further information, contact the Department of Visual Art at (785) 864-4401.

### Visual Art Education Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAE 500</td>
<td>Student Teaching</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>VAE 520</td>
<td>Instructional Technology in Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 530</td>
<td>Art and Design in Daily Life</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 596</td>
<td>Practicum in Teaching Art</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>VAE 598</td>
<td>Special Course</td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td>VAE 600</td>
<td>Evaluation and Measurement in Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 620</td>
<td>Instruction and Curriculum</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 680</td>
<td>Internship in Teaching Art</td>
<td>5-16</td>
<td></td>
</tr>
<tr>
<td>VAE 695</td>
<td>Technical Colloquium: Art Museums and Schools</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 698</td>
<td>Education of Women in the Arts</td>
<td>2-3</td>
<td></td>
</tr>
<tr>
<td>VAE 710</td>
<td>Assessment in Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 716</td>
<td>Teaching Art</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>VAE 750</td>
<td>Introduction to Art Museum Education</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>VAE 774</td>
<td>Art for Exceptional Children</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>VAE 780</td>
<td>Internship in Teaching Art</td>
<td>5-16</td>
<td></td>
</tr>
<tr>
<td>VAE 790</td>
<td>Applications of Technology in Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 798</td>
<td>Special Course</td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td>VAE 825</td>
<td>Seminar in</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>VAE 830</td>
<td>Seminar in</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>VAE 842</td>
<td>Teaching Art Criticism</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 850</td>
<td>Aesthetics, the Arts and Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 856</td>
<td>History of Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 875</td>
<td>Research in Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 900</td>
<td>Supervision and Evaluation of Visual Arts Programs</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 929</td>
<td>Research in Art Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 949</td>
<td>Artistic Learning and Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>VAE 995</td>
<td>Field Experience</td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td>VAE 996</td>
<td>College Teaching Experience</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td>VAE 997</td>
<td>Individual Study</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>VAE 998</td>
<td>Seminar in</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>VAE 999</td>
<td>Doctoral Dissertation</td>
<td>1-15</td>
<td></td>
</tr>
</tbody>
</table>

### Visual Art Education Requirements

Graduate students must register and pay tuition in each semester in which they are enrolled. A minimum of 45 graduate credit hours (including additional hours as required) is needed to complete a master’s degree. Prospective students must meet all application requirements for the master’s degree to be considered for licensure in art. For further information, contact the Department of Visual Art at (785) 864-4401.

**KU’s Spencer Museum of Art, [www.spencerart.ku.edu](http://www.spencerart.ku.edu), one of the nation’s premier university art museums, offers a collection of nearly 36,000 artworks and artifacts in all media. Work by student and faculty artists and artisans is displayed in the Kansas Union Gallery and in the Art and Design Gallery.**

**KU’s art program is accredited by the National Association of Schools of Art.**
School of Medicine

Contents

Combined Medical & Graduate Degrees .................. 280
Graduate Studies ......................................................... 280
Interdisciplinary Graduate Program in Biomedical Sciences ........................................................................... 280
Admission ................................................................. 280
Application ................................................................. 280
Curriculum ................................................................. 280
Courses ................................................................. 281
Anatomy & Cell Biology ............................................ 281
Admission ................................................................. 281
M.A. Degree Requirements ......................................... 281
Ph.D. Degree Requirements ......................................... 281
Requirements ......................................................... 281
Foreign Language or Research Skills ......................... 281
Teaching Expertise .................................................... 281
Dissertation ............................................................. 281
Anatomy Courses ..................................................... 281
Biochemistry & Molecular Biology ............................... 282
Admission ................................................................. 282
M.S. Degree Requirements ......................................... 282
Ph.D. Degree Requirements ......................................... 282
Prerequisites ............................................................. 282
Course Requirements ................................................. 282
Foreign Language or Research Skills ......................... 282
Examinations ............................................................ 282
Dissertation ............................................................. 282
Teaching Experience .................................................. 282
M.D./Ph.D. Combined Degree Requirements ................. 282
Biochemistry Courses ............................................... 283
Biostatistics ............................................................... 283
Clinical Research ....................................................... 283
Clinical Research Admission ..................................... 283
Clinical Research M.S. Degree Requirements ............... 283
Courses ................................................................. 283
Health Policy & Management ....................................... 283
M.H.S.A. Program ....................................................... 284
M.H.S.A. Admission Criteria, Materials, & Timeline ....... 284
M.H.S.A. Degree Requirements ................................. 284
Ph.D. Program .......................................................... 284
Ph.D. Admission Criteria, Materials, & Timeline ......... 284
Ph.D. Degree Requirements ......................................... 284
Joint Degree Programs .............................................. 284
Health Policy & Management Courses ......................... 285
History & Philosophy of Medicine ................................. 287
History & Philosophy of Medicine Course ................. 287
Microbiology, Molecular Genetics, & Immunology ............ 287
Admission ................................................................. 287
M.A. Degree Requirements ......................................... 287
Course & Thesis Requirements ..................................... 287
Ph.D. & M.D./Ph.D. Degrees ........................................ 287
Course Requirements ................................................. 287
Research Skills .......................................................... 287
Comprehensive Examination ..................................... 287
Dissertation ............................................................. 287
Microbiology Courses ............................................... 287
Molecular & Integrative Physiology ......................... 288
Admission ................................................................. 288
M.S. Degree Requirements ......................................... 288
Ph.D. Degree Requirements ......................................... 288
Research Skill .......................................................... 288
Physiology Courses .................................................. 288
Neurosciences ......................................................... 289
Admission ................................................................. 289
Program ................................................................. 289
Curriculum ............................................................ 289
Examinations ........................................................... 289
Courses ................................................................. 289
Pathology & Laboratory Medicine ............................... 289
Admission ................................................................. 289
General Requirements .............................................. 289
M.A. Degree Requirements ......................................... 289
Ph.D. Degree Requirements ......................................... 289
Pathology & Laboratory Medicine Courses ................. 290
Pharmacology, Toxicology, & Therapeutics ................... 290
Admission ................................................................. 290
Ph.D. Degree Requirements ......................................... 290
Course Requirements for the Ph.D. in Pharmacology ....... 290
Course Requirements for the Ph.D. in Toxicology ........... 291
Foreign Language ...................................................... 291
Dissertation ............................................................. 291
Pharmacology Courses .............................................. 291
Toxicology Courses .................................................. 292
Preventive Medicine & Public Health ......................... 292
Public Health Admission ............................................ 293
M.P.H. Degree Requirements ....................................... 293
Dual/Joint Degree Programs ....................................... 293
M.D./M.P.H. ............................................................ 293
M.S.N./M.P.H. .......................................................... 293
Ph.D./M.P.H. .......................................................... 293
Preventive Medicine & Public Health Courses .......... 293

See pages 12-13 for admission procedures.

The University of Kansas Medical Center campus in Kansas City, Kansas, is the home of the School of Medicine.
Combined Medical & Graduate Degrees | Graduate Studies | Interdisciplinary Graduate Program in Biomedical Sciences

Barbara Atkinson, Executive Vice Chancellor and Executive Dean
KU Medical Center, 3015A Murphy Bldg., Mail Stop 1049
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/som, (913) 588-5200, fax: (913) 588-5259

Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing.

Graduate programs are offered in anatomy and cell biology; biochemistry and molecular biology; clinical research; health policy and management; microbiology; molecular genetics and immunology; molecular and integrative physiology; neurosciences; pathology and laboratory medicine; pharmacology; toxicology and therapeutics; and public health. Combined degree options are available with medicine and other disciplines.

Basic admission requirements are listed in the General Information chapter of this catalog. Individual graduate programs have specific requirements including prerequisite undergraduate courses. These are listed or referenced in the program descriptions.

The School of Medicine offers the following graduate degrees:
- Master of Arts
- Master of Science
- Master of Health Services Administration
- Master of Public Health
- Doctor of Philosophy

For online information about graduate programs, see www.kumc.edu/igpbs.

Combined Medical and Graduate Degrees

See the General Information chapter of this catalog for information about combined medical and graduate degrees.

Graduate Studies

KU Medical Center’s Interdisciplinary Graduate Program in Biomedical Sciences offers a highly integrated core curriculum that involves faculty members from all the basic science departments and some clinical departments.

KU Medical Center’s Interdisciplinary Graduate Program in Biomedical Sciences offers a highly integrated core curriculum that involves faculty members from all the basic science departments and some clinical departments.

For online information about graduate programs, see www.kumc.edu/igpbs.

Combined Medical and Graduate Degrees

See the General Information chapter of this catalog for information about combined medical and graduate degrees.

Graduate Studies

KU Medical Center sponsors a number of interdisciplinary courses as well as courses in English as a second language. See the Graduate Studies chapter of this catalog.

Interdisciplinary Graduate Program in Biomedical Sciences

Director: Michael J. Werle
KU Medical Center, Mail Stop 3025
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/igpbs, (913) 588-2719, fax: (913) 588-2711

Graduate research at the University of Kansas Medical Center covers a rich and diverse range of topics in both basic and translational research. Basic research is geared toward understanding the basic biological systems that control life. By understanding these systems, rationale treatments to treat disease can be devised. The discovery and refinement of these rationale treatments is translational research. With such a range of research topics, it is often difficult to choose the best lab. The interdisciplinary program allows you to make an informed choice of labs to enter. You will hear from every researcher who is able to take a student into their lab during the Faculty Research Series. You will then choose three research rotations. At the end of the three rotations you will choose the lab that is the best fit for your research goals. Once you have chosen a lab, you will enter your chosen mentor’s department to complete your Ph.D.

The interdisciplinary program covers the first two semesters of graduate study. Students take a core group of courses that cover all aspects of cell biology, biochemistry, and cell signaling. Courses are both lecture based and discussion based. Every Friday, students meet to discuss lecture topics. You will receive introductions to critical research techniques, work on problem sets, and critically evaluate our current knowledge base. In addition, students take courses in scientific ethics and scientific communication. Scientific communication covers graphic presentation of data and both written and oral communication. At the end of the first year, you will have built a considerable knowledge base, and will have skills in scientific communication, critical thinking, and problem solving. You will expand your knowledge base and skills by taking advanced courses in your chosen department or program. Our graduate program will prepare you for a successful career in research.

Admission

To be admitted to a basic science graduate program, the applicant must meet the following general entrance requirements:
1. Bachelor’s degree (B.S. or B.A.).
2. Graduate Record Examination (GRE) score.
3. The following academic prerequisites:
   a. Two semesters of general chemistry
   b. Two semesters of organic chemistry or one semester of organic chemistry and one semester of biochemistry
   c. Two semesters of biological sciences
   d. One semester of calculus
   e. One semester of physics
5. For international applicants, a satisfactory score on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) taken within the last two years. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information.

Application. Applications to the Interdisciplinary Graduate Program, as well as direct applications to the basic sciences departments, are facilitated by IGPBS staff. Please complete the online application. Application details are on the IGPBS Web site: www.kumc.edu/igpbs.

In addition to the online application we require one copy of your official college transcripts, an official copy of your GRE score (Institutional code 6895, department code 5101), and three letters of reference.

If you are an international student, request an official copy of your TOEFL score be sent to the IGPBS Office (Institutional code 6895; department code 5101).

Curriculum

In the fall semester, students take the following courses:
- GSMC 850 Introduction to Biomedical Research I .................................................... 2
- GSMC 851 Molecular Genetics ..................................................................................... 2
- GSMC 852 Introduction to Biomedical Research II ...................................................... 2
- GSMC 856 Introduction to Research Ethics ................................................................. 1

www2.kumc.edu/igpbs
Courses
For descriptions of GSMC courses, see the Graduate Studies chapter of this catalog.

Anatomy and Cell Biology

Chair: Dale R. Abrahamson
KU Medical Center, 2008 Wahl Hall East, Mail Stop 3038
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/anatomy, (913) 588-7000

Graduate Adviser: Douglas Wright, KU Medical Center,
2087 Kansas Life Sciences Innovation Center, Mail Stop 3038,
(913) 588-2713

Professors: Abrahamson, Bast, Berman, Durham, Hunt, Kinsey, Klein, Little, MacGregor, Stephens

Professors Emeriti: Chapman, Mohn, Nelson

Associate Professors: Bruses, De Lisle, Enders, Stehno-Bittel, Vanden Heuvel, Werle, Wright

Assistant Professors: Nishimune, Petroff, Rongish, Czirok, Zhang

The graduate programs are cell biology, development biology, and neurosciences—primarily for the Ph.D. and combined M.D./Ph.D. degrees. The M.A. degree may be granted in appropriate circumstances.

Admission
Application to the Ph.D. and master’s programs in anatomy and cell biology are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and the admission requirements.

M.A. Degree Requirements
A minimum of 30 credit hours is required. These hours are divided between formal course work and research/thesis. The student must satisfactorily defend the thesis in an open seminar as part of the final examination.

Ph.D. Degree Requirements
Principal courses are listed below. The majority are required as determined by the subspecialization of the student. Unspecified, but required, credits taken outside the department are selected with the counsel of the adviser, whom the student usually selects before starting the second year of study. By or at the end of the second year, the student must satisfactorily pass written and oral comprehensive examinations. The student writes and defends a grant proposal in an area of research chosen in consultation with the graduate adviser. After successful completion of the oral comprehensive examination, the student, with the advice and consent of the adviser, must name three faculty members to be recommended for the doctoral research committee.

Requirements. All students must take the courses of the Interdisciplinary Graduate Program in Biomedical Sciences. After the first year, students must take three semesters of ANAT 900 Analysis of Scientific Papers. Advanced departmental and interdepartmental courses are required based on the student’s specialized interests and needs. Students select these after consultation with their advisers. The student must maintain a B average overall, and the department requires a B average in all didactic courses.

Foreign Language or Research Skills. Before taking the comprehensive Ph.D. oral examination, the student must demonstrate additional expertise outside his or her immediate research area by meeting the following requirements:

1. Demonstrate proficiency in a relevant research skill that will not be used routinely as a primary skill in the student’s doctoral research or
2. Demonstrate a reading knowledge of one foreign language.

PhD Degree Requirements

ANAT 897 Research Rotations ...................................................................................... 1
ANAT 898 Introduction to Faculty Research ................................................................. 1
PHSL 896 BioGraphics .................................................................................................. 1

In the spring semester, students take the following courses:
GSMC 853 Cellular Structure ...................................................................................... 2
GSMC 854 Cell Communication .................................................................................... 2
GSMC 855 Introduction to Biomedical Research II ..................................................... 2
ANAT 897 Research Rotations ...................................................................................... 1

ANAT 832 Electron Microscopy Techniques (3). Basic methods in preparation of tissues and cells for ultrastructural studies; use of electron microscopy in specific research problems; interpretation of biological ultrastructure; reading assignments and discussion sessions. Prerequisite: ANAT 830, or consent of course instructor. LEC
ANAT 845 Graduate Histology (2). This course will bridge student knowledge of systems, organs with cellular histology and is designed as an introduction to histological techniques, microscope/ optics, immunohistology. The course will be held within a one month period in the summer. Individual tissues will be covered by a brief 30 minute lecture followed by a 90 minute session of observing the tissues under the microscope. Prerequisite: Advanced course in cell biology (IGPBS module 4 or equivalent) or consent of instructor. LEC
ANAT 846 Advanced Neuroscience (5). Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as PHCL 846, PHSL 846 and NURO 846). Prerequisite: Permission of course director. LEC
ANAT 847 Developmental Neurobiology (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction; Cellular Differentiation; Axon Growth and Guidance; Target Selection; Cell Survival and Growth; Synapse Formation; Synapse Elimination; and Development of Behavior. (Same as NURO 847 and PHSL 847.) Prerequisite: Advanced Neuroscience (ANAT 846, NURO 846, PHSL 846) or consent of instructor. LEC
ANAT 848 Molecular Mechanisms of Neurological Disorders (3). An in-depth coverage of pathogenic mechanisms in neurological diseases; cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), neurogenetic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as NURO 848, PHSL 848, and PHSL 846.) Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC
ANAT 868 Advanced Developmental Biology (2). Detailed analysis of developmental mechanisms in key vertebrate systems. Fertilization, cleavage, morphogenesis and gene expression, axis determination, and organogenesis, with special attention to the most recent advances. Prerequisite: IGPBS Module 4 or consent of instructors. LEC
ANAT 869 Grant Writing (3). All aspects of preparing grant applications are covered. This includes writing an actual grant application containing all the usual elements of grants - budgets, biosketches, resources, and scientific text. In addition, different funding agencies, building research teams, the review process, responding to reviewers, and resubmitting grants will be covered. (Same as HP&M 878 and NRSG 889.) Prerequisite: Appropriate research methods and statistics courses in student’s current graduate program; and permission of the instructor. For students in the Outcomes Management and Research concentration, HP&M 821. LEC
ANAT 870 Techniques in Anatomy and Cell Biology (1-3). Advanced study allowing a student to pursue a particular subject through readings, laboratory work, and conferences with a faculty member. Prerequisite: Consent of instructor. IND
ANAT 880 Advanced Topics: ____ (1-5). Special study allowing a student to pursue a particular subject through readings, laboratory work, and conferences with a faculty member. Prerequisite: Consent of instructor. IND
ANAT 885 Seminar (1). Research-oriented presentations in a seminar format by student, faculty, and guests. LEC
ANAT 900 Master’s Research (1-10). Independent laboratory investigation approved by and under the supervision of the student’s adviser, and in partial fulfillment of the requirements for the M.A. degree. Prerequisite: Consent of adviser. RSH
ANAT 900 Materials 7 of the IGPBS Graduate Research Rotation: courses of the new IGPBS program is to: 1) give students a strong foundation in the basic principles of the basic biomedical sciences, 2) introduce students to biomedical research, and 3) provide students with sufficient introduction to the research conducted in the KUMC to allow them to select a research adviser. To facilitate points 2 and 3, the IGPBS has organized a series of research lab rotations that occur during the first year of the program. The first research rotation begins half way through the first semester and the second and third research rotation occur in the second semester. This research series in-
introduces students to the methods of biomedical research and helps them ultimately de-
terminate which faculty member they will select as a research adviser for their doctoral research. These research rotations are organized as Pass/No credit courses. LEC

ANAT 898 Module 8 of the IGPBS: Introduction to Faculty Research (1). The main objectives of the new IGPBS program is to: 1) give students a strong founda-
tion in the basic principles of the basic biomedical sciences, 2) introduce students to biomedical research, and 3) provide students with sufficient introduction to the research conducted in the KUMC to allow them to select a research adviser. To fa-
cilitate point 3, the IGPBS has organized a seminar series entitled "Introduction to Faculty Research." In each session of this series, three faculty members give a brief 20-minute overview of their research program at KUMC to the IGPBS students. This is structured as a 1 credit, Credit/No Credit course that occurs during the first semester. This research series helps the students select faculty for research lab rotations and ultimately helps them determine which faculty member they will se-
lect as a research adviser for their doctoral research. LEC

ANAT 899 Senior Thesis (1-6). Preparation of the formal thesis based upon in-
dependent research and in partial fulfillment of the requirements for the M.A. de-
gree. Credits will be given only after the thesis has been approved by the depart-
ment. Prerequisite: Consent of adviser. THE

ANAT 900 Analysis of Scientific Papers (1). Research articles are analyzed by the student with the guidance of an instruc-
tor. ANAT 900 Analysis of Scientific Papers (1). Research articles are analyzed by the

ANAT 999 Doctoral Dissertation (1-12). Preparation of the dissertation based upon in-
dependent research and in partial fulfillment of the requirements for the Ph.D. de-
gree. Credits will be given only after the dissertation has been approved by the student’s dissertation committee. Prerequisite: Consent of adviser. THE

Biochemistry and Molecular Biology

Chair: Gerald Carlson
KU Medical Center, Mail Stop 3030
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/biochemistry, (913) 588-7005

Graduate Adviser: Glen Andrews, 2034 BRF, (913) 588-6935

Professor Emeritus: Ebner

Associate Professors: Ladokhin, Fontes

Assistant Professors: Fenton, Holyoak, Swint-Kruse

The M.S., Ph.D., and combined M.D./Ph.D. degrees may be earned with a major in biochemistry and molecular biology. The M.S. in biochemistry and molecular biology normally leads to positions at the advanced technical level in academic research, industry, or government. It may lead to teaching positions at the secondary or junior college level. The Ph.D. most often is followed by one or more years of postdoctoral training in a specific area of research. Ph.D. degree holders in biochemistry and molecular biology may find positions in industry or government and, with some postdoctoral experience, may obtain faculty positions at the college or university level. The Ph.D. is required for careers in independent research in biochemistry and molecular biology.

Admission

Application to the Ph.D. and master’s programs in biochemistry and molecular biology are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and the admission requirements. Applicants specifically interested in the Biochemistry and Mole-
ular Biology graduate program should contact Liskin Swint-
Kruse (lswint-kruse@kumc.edu).

M.S. Degree Requirements

The curriculum normally requires a minimum of 30 semester credit hours. Half of these hours are usually formal course work and the remainder research and thesis. Students generally must complete the IGPBS core curriculum. Other required courses are BCHM 862, BCHM 890, and BCHM 899. There is no research

Ph.D. Degree Requirements

Prerequisites. The applicant should have a bachelor’s degree, mathematics through calculus, two semesters of organic chemistry, and background in the biological or physical sciences. Physical chemistry is recommended but not required. Applicants must take the general aptitude sections of the Graduate Record Examination.

Course Requirements. Complete the IGPBS core curriculum.

Year Two, Fall Semester. Required:

BCHM 862 Biochemical Research-Literature Seminar ........................................ 1
BCHM 890 Master’s Research ........................................................................... 1-5

Required Elective (choose one): ................................................................. 3

BCHM 868 Principles of Macromolecules (3)
BCHM 922 Advanced Molecular Genetics (3)

Electives (choose one or more): ............................................................... 1-3

BCHM 850 Topics in Biochemistry (1)
PATH 803 Stem Cell Biology (2)

Year Two, Spring Semester. Required:

BCHM 862 Biochemical Research-Literature Seminar ........................................ 1
BCHM 890 Master’s Research ........................................................................... 1-5

Required Elective (choose one or more): ....................................................... 3-6

BCHM 850 Topics in Biochemistry (1)
BCHM 923 Protein Structure and Function (3)
ANAT 868 Advanced Developmental Biology (2)
MICR 920 Advanced Microbial Molecular Genetics: Prokaryotes (3)

The student must maintain at least a B average in all nonre-
search and nonseminar courses. Credit in research cannot be used to meet this grade-point average. The student completes her or his curriculum by enrolling in BCHM 950 Doctoral Research and BCHM 999 Doctoral Dissertation. All graduate students on half-
time assistantships are expected to enroll in at least 6 credit hours each regular semester and 3 credit hours for the summer session.

Foreign Language or Research Skills. Before taking the comprehen-
sive oral examination, the student must demonstrate additional expertise outside the primary research area by completing a course or equivalent in one of the following areas: (1) basic statistics, (2) computer programming, (3) electronics, and (4) a one-year course or its equivalent in French, German, Japanese, or Russian. If a student has had previous training in one of these areas, he or she may petition the graduate committee for credit for this requirement.

Examinations. Comprehensive written and oral examinations are administered during the second year of full-time graduate study and cover broad aspects of biochemistry and molecular biology.

Dissertation. The student must complete original research, write a dissertation that is acceptable to a dissertation committee, present the results in a formal seminar, and defend the disserta-
tion to a doctoral committee.

Teaching Experience. Graduate students may gain teaching experience as tutors for medical biochemistry topics and as participants in departmental seminar programs.

M.D./Ph.D. Combined Degree Requirements

Students normally enter the graduate phase of the M.D./Ph.D. program after completion of the basic medical science curriculum. Depending on their backgrounds in biochemistry and related sciences, students may begin early, such as the summer session before or during medical school. The course requirements are the same as for the Ph.D., except that the basic medical science curriculum is accepted in lieu of the IGPBS year. All other re-
quirements for the Ph.D. program apply.
Biochemistry Courses


BCHM 801 Research in Biochemistry (1-10). LEC

BCHM 802 Biochemistry Seminar (1). Weekly meetings. LEC

BCHM 808 Principles of Macromolecules (3). Application of physical techniques to the study of biological macromolecules in solution. Emphasis on utilization of data obtained from such studies in interpreting biological processes at the molecular level. Prerequisite: BCHM 891, BCHM 892, BCHM 893, BCHM 894, two semesters of calculus, and two semesters of physics, or consent of instructor. LEC

BCHM 850 Topics in Biochemistry (1-3). Selected topics in biochemistry with varying subject matter. Students should inquire before enrolling. Topics are in-depth studies of current research areas. The course may consist of formal lectures and/or directed readings and studies. IND

BCHM 862 Biochemical Research-Literature Seminar (1). Students and faculty meet once weekly to discuss the research of students or the current biochemical literature. The student is required to make one presentation. Prerequisite: Consent of instructor. LEC

BCHM 890 Master's Research (1-15). Research for the M.A. degree. RSH

BCHM 899 Master's Thesis (1-15). Restricted to the writing of the master’s thesis. THE

BCHM 922 Advanced Molecular Genetics (3). An in-depth analysis of the structure and function of gene regulatory proteins and the mechanisms of gene transcription, and DNA replication and repair. Lectures and discussion of current literature. Prerequisite: BCHM 891, BCHM 892, BCHM 893, BCHM 894 or equivalent, or consent of instructor. Course will be presented in the fall semester and will include several Biochemistry Faculty leading discussions in their area of research interests. LEC

BCHM 923 Protein Structure and Function (3). The relationship between protein structure, binding, and physiological function. Emphasis is on proteins as enzymes, structural components, and regulators. Prerequisite: BCHM 808 or consent of instructor. LEC

BCHM 990 Doctoral Research (1-15). Research for the doctoral degree. RSH

BCHM 999 Doctoral Dissertation (1-15). Restricted to the writing of the doctoral dissertation. THE

Biostatistics

Chair: Matthew S. Mayo, mmayo@kumc.edu
KU Medical Center, 5028P Robinson, Mail Stop 1026
3901 Rainbow Blvd., Kansas City, KS 66160
biostatics.kumc.edu, (913) 588-4703

Professors: Mayo
Associate Professors: Gajewski
Assistant Professors: He, Mahnken, Wick, Yeh
Research Assistant Professors: Keighley

M.S. and Ph.D. degrees in biostatistics are being developed. See the department’s Web site, biostatics.kumc.edu, for program updates.

Clinical Research

Offered through the Department of Preventive Medicine and Public Health

Director: Won S. Choi
Associate Director: Matthew S. Mayo
Assistant Director: Jonathan D. Mahnken
KU Medical Center, 4004 Robinson Hall, Mail Stop 1008
3901 Rainbow Blvd., Kansas City, KS 66160
http://ph.kumc.edu/mscr.html, (913) 588-2720

Professors: Ellerbeck, Lai, Mayo, Neuberger
Professors Emeriti: Chin, Jerome
Associate Professors: Choi, Richter, Shireman

Clinical Research Admission

Admission to the M.S. in clinical research degree program is competitive. Candidates should meet all general requirements for admission to graduate studies including a baccalaureate degree from a regionally accredited institution and an undergraduate grade-point average of 3.0 on a 4.0 scale. Applicants also should have passed at least one semester of college calculus.

Applicants who have not earned doctoral degrees in the U.S. must submit official scores on the Graduate Record Examination or other professional test scores (such as the Graduate Management Admission Test, Medical College Admission Test, Law School Aptitude Test) that are not more than five years old. Applicants whose native language is not English also must submit scores on the Test of English as a Foreign Language that are not more than two years old. No applicant with a score below 23 on any section of the computer-based (CBT) or internet-based (IBT) TOEFL examination or 57 on the paper-based TOEFL or equivalent examination will be considered. See www2.kumc.edu/aa/gradstudies/grad_adm.htm.

All M.S. applications must be supported by three letters of recommendation or evaluation forms from persons qualified to assess the candidate’s aptitude for the program. Applicants must include a current résumé or curriculum vitae and a signed personal statement indicating their intended emphasis upon acceptance.

Clinical Research M.S. Degree Requirements

The 33-credit-hour M.S. degree program includes six core courses (18 hours) in epidemiology, an epidemiology laboratory, biostatistics I and II, statistical computing in research, and advanced epidemiologic methods I and II. The program also includes elective credits and a thesis. Students must complete 12 credit hours in elective courses, with 6 of those hours in the chosen emphasis. The capstone requirement, a thesis, accounts for the final 3 credit hours. Students are allowed up to seven years to complete the M.S. in clinical research degree; however, most students can complete the program in two to three years of full-time study.

Courses

See Preventive Medicine and Public Health for course offerings for the Clinical Research M.S. program.

Health Policy and Management

Chair: Glendon G. Cox, gcox@kumc.edu
KU Medical Center, 5014 Student Center, Mail Stop 3044
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/hpm, (913) 588-3763

Graduate Adviser: Deborah Lewis, dlewis4@kumc.edu,
5001 Student Center, (913) 588-3763

Professors: Cox, Fox, Zimmerman
Associate Professor: Lee
Assistant Professors: Averett, Bonney, Cook, Gambino, Grasso, Kingsley, Murray

The M.S. in clinical research is offered through the Department of Preventive Medicine and Public Health.

There is a clinical campus of the KU School of Medicine in Wichita.
The Department of Health Policy and Management offers the Master of Health Services Administration and Ph.D. in Health Policy and Management degrees.

**M.H.S.A. Program**

Health services administration is an academic discipline that offers a systematic overview of the health care system, a clear perspective on contemporary health policy, a mastery of management methods, and a broad exposure to the practice of health care management. Programs in health services administration prepare health care managers for positions with hospitals, health care systems, long-term care facilities, clinics, insurance plans, consulting firms, health departments, and government.

**M.H.S.A. Admission Criteria, Materials, and Timeline.** Admission is based on the applicant’s undergraduate and/or graduate record and references. Completion of a bachelor’s degree is required. Admission is competitive and limited. Each domestic applicant must pay a processing fee of $50; the application fee for international applicants is $65.

Materials required include: (1) successful completion of a bachelor’s degree or equivalent with a minimum grade-point average of 3.0 on a 4.0 scale, (2) a completed application form and application fee, (3) a statement of goals/purpose, (4) three letters of recommendation, (5) an official transcript from each institution beyond the secondary level where courses have been taken, and (6) for international students, fulfillment of minimum English Proficiency Requirements. See [www2.kunc.edu/aa/gradstudies/grad_adm.htm](http://www2.kunc.edu/aa/gradstudies/grad_adm.htm) for information.

Applicants must also have completed 3-credit hour course prerequisites (with a minimum grade of B in each course) in statistics and financial accounting. A personal interview is required. If travel to the area is impossible, a telephone interview may be substituted. Students are admitted for the fall semester only. Early application is encouraged. The deadline is April 15.

**M.H.S.A. Degree Requirements.** All candidates must complete, at a satisfactory level, 52 cr credit hours of courses in the following five core areas: (1) policy, governance, and legal; (2) financial; (3) leadership, systems, and decision science; (4) health services operations; and (5) integration and synthesis. An internship is required of all students. Full-time students are encouraged to seek a residency/fellowship after graduation.

Courses are taught in late afternoons and evenings on the Medical Center campus in Kansas City. Students begin course work with foundation courses and proceed through the curriculum in a predefined sequence.

**Ph.D. Degree Program**

The Ph.D. in Health Policy and Management prepares high-level health services researchers for careers in academic settings or in public and private organizations where advanced research and analytic skills are required. Course work is offered at KU Medical Center. Classes for the Ph.D. are held during daytime and late afternoon hours, Monday through Thursday.

**Ph.D. Admission Criteria, Materials, and Timeline.** Applications are accepted from individuals with the following credentials:

1. A master’s degree in health services administration or a related field (e.g. public health, public administration, business, social sciences, biological sciences, nursing).
2. Minimum grade-point average of 3.5 (on a 4.0 scale) for all post-baccalaureate course work.
3. At least one graduate-level statistics course.
4. A set of prerequisite courses must also be completed before applying. Applicants should demonstrate successful completion of the following course work (a minimum of 3 graduate-level credit hours in each area) during their prior education:
   - Health delivery systems
   - Health economics
5. Three academic letters of recommendation.
6. A statement of career objectives and purpose.
7. Transcripts of all post-secondary academic work.
8. Graduate Record Examination (GRE) general exam scores

The following materials are required:

1. A completed KU graduate application for admission (domestic student application/international student application).
2. A nonrefundable application fee ($50 for domestic applicants, $65 for international applicants).
3. Three academic letters of recommendation.
4. A statement of career objectives and purpose.
5. Transcripts of all post-secondary academic work.
6. Graduate Record Examination (GRE) general exam scores
7. A copy of the applicant’s master’s thesis, graduate-level research paper or other example of the applicant’s scholarly research writing.
8. A copy of the applicant’s resume or curriculum vitae.
9. In the case of international applicants, TOEFL scores will be considered as part of the application. Only international applicants with IBT-based TOEFL parts scores (or equivalent scores on CBT, paper TOEFL, or IELTS) above the following thresholds will be considered for admission:
   - Listening: 26
   - Reading: 26
   - Speaking: 23
   - Writing: 23

The above materials must be submitted (either in person or by mail) **no later than February 15** for entry the following August.

**Ph.D. Degree Requirements.** The doctoral program is a 56-credit-hour, post-master’s program:

**Stage 1.** Core knowledge (11 credit hours) in health care policy and management and basic quantitative and qualitative research methods.

**Stage 2.** Specialization (33 credit hours) in a specific area of either policy or management, advanced statistical analysis and research methods, and a teaching practicum.

**Stage 3.** Dissertation (12 credit hours minimum).

An additional 18 credit hours of prerequisites must be completed before entering the program. The program, including dissertation, is designed to be completed in a minimum of four academic years. Students are expected to enroll continuously for a minimum of 10 credit hours a semester.

**Foreign Language or Research Skills.** Before taking the comprehensive Ph.D. oral examination, the student must demonstrate expertise outside his or her immediate research area by demonstrating proficiency in a relevant research skill that will not be used routinely as a primary skill in her or his doctoral research or by demonstrating a reading knowledge of a foreign language.

**Joint Degree Programs**

The **J.D./M.H.S.A.** joint degree program combines into four years of full-time study the Juris Doctor (J.D.) program offered by the School of Law and the Master of Health Services Administration (M.H.S.A.) program offered by the Department of Health Policy and Management. The program offers students who plan to practice health law or health services management a thorough academic grounding in both disciplines.

The joint **M.S. in Nursing/M.H.S.A.** degree program combines the M.H.S.A. degree offered by the Department of Health Policy and Management and the Master of Science degree offered by the School of Nursing. This program gives students the opportunity to acquire training in the convergent fields of nursing and health services administration. The program combines course work, allowing the two degrees to be completed in 60 credit hours, compared to 89 credit hours if the degrees were pursued independently. Students must be admitted to each program to pursue the joint degree.

The joint **M.D./M.H.S.A.** degree program prepares students to enter careers as physician executives or to provide administrative support for their medical practice. As the health care en-
environment becomes more complex and competitive, administrative skills can be extremely important to individuals starting careers in medicine or those seeking to enhance their current careers. The M.S.H.A. portion of the curriculum combines social science and business content in the context of health care and prepares students for management and executive positions in health care organizations. Students complete requirements for the M.D. degree as specified by the School of Medicine. Course work for the M.H.S.A. portion of the joint degree should be taken in the summer between years one and two of the medical school curriculum and in a year between years two and three of the medical school curriculum. The internship required for the M.H.S.A. degree may be completed as an elective during year four of medical school. Depending on a student’s course schedule, it may be necessary to complete one or two M.H.S.A. courses during years three and four of the medical school curriculum. The total time for completion of the program is five years.

§ Health Policy and Management Courses

HP&M 610 The Health Care System (4)
HP&M 620 Women and Health Care (3)

HP&M 810 The Health Care System (3). The structure and function of the components of the U.S. health care system are introduced in the context of the history, values and social forces that influenced its development and evolution. Students gain exposure to vocabulary and concepts with aspects of the system, including delivery (providers, institutions, services), resources (finance, payment, insurance), population and public health, and outcomes (cost, access, quality). Health care outcomes from consumer, clinical, and societal perspectives are explored. LEC

HP&M 819 Research Inquiry to Support Evidence-Based Practice (3). Inquiry and evidence-based management practice are hallmarks of administrative science, requiring systematic data collection and analysis. The research process is introduced from a health services research perspective, with emphasis on epidemiologic survey, and program evaluation and outcome methods to support decision-making. Both quantitative and qualitative methodologies are presented as tools to measure and analyze health care services quality and the impact of program planning and change strategies. LEC

HP&M 822 Health Economics (3). This course introduces the core concepts from economics to health care with a focus on helping health care managers use economic tools in making sound decisions. The demand for health care products, the structure of insurance, and the supply of health care products are examined. Students will apply a variety of economic analyses to health policy and health system issues. LEC

HP&M 825 Financial Concepts in Health Care Management (3). Financial accountability is a critical responsibility of health services administrators. This course presents basic concepts and techniques for effective decision-making and stewardship, including financial statement analysis; strategic financial planning; capital formation; responsibility and cost accounting; operational, capital and cash budgeting; capital project analysis; and working capital management. LEC

HP&M 827 Financial Applications in Health Care Management (3). Administrative applications of financial analysis are introduced. Financial concepts are applied to support strategic and financial goals. The concept of integrating operational and strategic planning into a strategic financial plan is developed. This course will foster integration and confidence in performing and applying financial analytical procedures such as financial statement analysis, financial planning, cost analysis, and planning for unforeseen events. Emphasis is placed on understanding the value and importance of financial information for decision making in health care organizations. LEC

HP&M 831 Reimbursement and Fiscal Policy (2). Reimbursement and fiscal policy practices impact the success and the economic well-being of health care institutions, payers, and patients. This course develops the student’s understanding of complex reimbursement methodologies from the perspective of providers and payers. Students will explore the strengths and weaknesses of the major methods of third party reimbursement, the types of managed care organizations and the payment methodologies employed. Students are also prepared to approach reimbursement policy issues both from the payer and the provider viewpoint. LEC

HP&M 833 Governance, Ethics, and Health Law (3). The functions of health services governance will be examined, including the leadership role of health services administrators in their interactions with the board. While the board sets the tone for legal and ethical functions, the effective administrator builds on and co-creates with the broad mechanisms that ensure public accountability. Governance models, ethical frameworks and issues, and principles of health law are interpreted for administrative practice, including frameworks and issues, and principles of health law are interpreted for administrative practice, including methods for conducting board evaluation and providing feedback. LEC

HP&M 837 Health Policy (3). This course examines the development, implementation, and evaluation of federal, state, and local health policy in the United States. Particular attention will be given to (1) the development of public institutions and policy goals; and (2) current policy problems such as cost controls, reimbursement, health services utilization, program assessment and evaluation, public health, and public/private investment and resource planning. Students will be expected to synthesize and integrate knowledge to apply theory and principles in ways consistent with professional practice as a health policy analyst. LEC

HP&M 840 Organizational Foundations for Leading Change (3). Self-discovery as a foundation for professional development while exploring the concepts of leader, manager, and fellow is emphasized. Analysis and prediction of an organization’s stages of development and its capacity for linear and social change are introduced through the lens of complexity science. Political, legal, ethical, and other issues that constrain and destabilize organizations and strategies to restore equilibrium are explored. (Same as NURS 880). LEC

HP&M 842 Roles, Functions, and Care Models (2). This course examines the nature and characteristics of the health care workforce needed to deliver direct, indirect, and professional roles and explores how these roles are translated through the lens of key organizational functions and care delivery modalities. Common care delivery models, such as primary, team, and patient-centered care approaches to organization delivery are explored in clinical settings. Students will develop an understanding of long-term and community and public health entities. Administrative challenges and opportunities for managing a diverse workforce are presented. LEC

HP&M 844 Communication for the Health Care Executive (2). This course focuses on attaining effective communication skills to deliver high-impact messages to stakeholders ranging from board members, to diverse communities of interest, to policymakers and regulators. Verbal and written skill development addresses executive presence to perform communication functions such as conducting an ‘ask’ from a policymaker or potential benefactor, using storytelling and data to shape critical messages to the media, and communicating value-driven memoranda to internal audiences. The use of emerging technologies to aid in communication effectiveness will also be presented. LEC

HP&M 846 Managing Information Systems and Technology (3). This course covers fundamental concepts of management information systems; current and developing health and business information systems of interest to managers in health services organizations; health care information system architecture; security and privacy issues; uses of health care information for clinical and strategic analysis and information services; technical support; technicians required to develop and evaluate a technological request for proposal; and thoughts on the future of health care information systems including bio-informatics, community health systems and web-based access to health information. The course will also cover current information and issues regarding the latest technology applications. LEC

HP&M 848 Designing Health Care Organizations (3). This course examines the interplay between institutional practices and policy development aimed at evidence-based design, plan technology, safety systems, and healthcare management. Students gain exposure to regulatory policies and learn concepts of organization and structural design and its influence on satisfaction, safety, and work usefulness in the operations and maintenance of effective health services organizations. Design is approached as a comprehensive and multifaceted decision-making process that requires communication, budgeting, and facilities system analysis and evaluation in all health services settings. LEC

HP&M 850 Achieving Quality, Safety, and Efficiency (3). This course explores ways to improve health care efficiency, quality, and safety with a focus on micro-systems. The class will examine the current performance of select health care institutions, sources of performance variability (variation theory), methods for measuring performance (measurement theory), and methods for improving performance (change theory). Topics include continuous quality improvement, lean, rapid cycle change, six sigma strategies, and public reporting and accountability. Students will apply performance improvement and risk management techniques to a course project. (Same as NURS 882). LEC

HP&M 852 Strategy Development and Marketing (3). Leaders must be both strategically and operationally oriented to meet the challenging health care needs of populations-of-interest within a service area. Methods to assess, interpret, and plan for shifting markets will be explored, using a variety of data-capture tools. Strategic planning approaches are presented, which emphasize the nimbleness and resiliency in destabilizing or shifting health care markets. Strategic issues and trends that support service line development, program expansion, and foster cultural and social programming are studied with emphasis on patient and family-centric care and personalized health care as part of communicating and marketing strategic options. Program evaluation and other evaluation strategies are reinforced to measure strategic impact. LEC

KU Medical Center Graduate Studies GSQC courses, including courses in English as a second language, are listed on page 40.

Research at KU Medical Center encompasses a broad spectrum, including neuroscience; protein structure and function; pharmacology and toxicology; viral, microbial, molecular, cellular, developmental, reproductive, immunological, renal, and general physiological biology; and clinically related studies focusing on a broad range of human diseases.
Health Policy & Management

HP&M 854 Human Resources and Workforce Development (3). The focus of this course is to understand the leadership functions of human resource management in organizations to create a competitive edge through employee empowerment. Core human resource concepts are introduced and applied to optimize human capital within a variety of health care settings, including compensation and benefits, employee recognition, and employee/ labor relations. National, regional and local strategies and workforce trends are discussed related to best practices for the selection, retention, and management as a health care employer of choice. (Same as NSRG 891). LEC

HP&M 857 Evaluating Outcomes of Health Care (3). This course will trace the development of the outcomes research movement and provide exams of methodologies, assessment instruments and issues that guide outcomes research. It will also review the methods for linking research findings with clinical practice (i.e., clinical practice guidelines). Obstacles to accessing clinical guideline and their application will also be discussed. Finally, the translation of outcomes research methodology into programs to improve health quality will be presented. Prerequisite: Permission of instructor. LEC

HP&M 858 Health and Social Behavior (3). Health care as a cultural and socio-behavioral system is presented. Using research and theory, students explore alternative perspectives on the nature of medicine and healing within comparative health systems, both U.S. and abroad. Students examine at an advanced level how health care organizational structures contribute to patient health outcomes and influence employee behaviors. The course reinforces the nature and characteristics of the health professions, particularly medicine and nursing perspectives, and the complex behavioral dynamics of health professionals with organizational leaders. LEC

HP&M 860 Graduate Internship in Health Care Services Administration (1-3). Novice and experienced health services administrators are introduced to the internship. The internship is designed to meet the needs of individual students to advance their career functioning and set in motion a professional development plan. The inexperienced administrator will use the internship as a mid-curriculum opportunity to apply and synthesize the knowledge, skills, abilities and personal attributes acquired in their program. Students will develop their own individualized work plan and complete an internship experience that extends their knowledge, skills, abilities and personal attributes to an advanced level. FLD

HP&M 861 Capstone Seminar (1). The knowledge, skills, and abilities learned throughout the program are validated in capstone experience. A case study approach will be used to synthesize and apply principles including, but not limited to, the ability to critically evaluate the research and information management research and decision making. This course will enhance the student’s ability to synthesize and apply the knowledge gained throughout the program to meet real-world challenges. FLD

HP&M 862 Research Practicum in Health Services Administration (3). A course for dialogue, critique, and a plan for professional skills development. IND

HP&M 871 Research Inquiry I: Defining and Supporting the Research Problem (3). Students add to their developing knowledge of research inquiry and use of appropriate analytic techniques, learning to assess and choose appropriate analytic techniques, whether qualitative or quantitative. This course requires that students develop a data analysis and presentation plan. Emphasis is placed on evaluating the relative advantages and disadvantages of research strategies in the context of the research question. Prerequisite: HP&M 871, and NSRG 944, or permission of the instructor. FLD

HP&M 875 Statistical Applications Using Large Data Bases (3). The management of large (macro) data bases is a critical analytic skill for health care and management research. This course exposes students to the various types and configurations of large data sets and presents an array of statistical techniques and procedures that can be employed to analyze them. Attention is placed on the criteria used to select a design strategy for a variety of data types and the trade-offs in selecting statistical techniques and one analytic plan over another. Prerequisite: HP&M 819, or permission of the instructor. LEC

HP&M 877 Health Care and Social Policies in Sweden and Finland (3). The purpose of this course is to provide students with an opportunity to learn how the Swedish welfare state is organized and to see firsthand how it works on all levels and in various locations around the Stockholm-Uppsala area. Students will learn about Swedish history and culture, and will be challenged to re-examine many commonly held assumptions about health care in the United States. A special feature of the class is a four day visit to Helsinki, Finland, Sweden’s Nordic neighbor. Finland offers an interesting variant on the “Nordic model” of health and social care, which demonstrates how a highly competitive business economy can be successfully combined with a welfare state. The majority of the class will be spent in discussion of the health care system of the United States, using sociohistorical and sociological perspectives. Considers the health status and health care problems of women in relation to cultural aspects of medicine and health care; the roles of both informal and professional health care providers; the political economy of health care systems; and the relationship between gender and state. Prerequisite: HP&M 810, or permission of instructor. LEC

HP&M 878 Grant Writing (3). The course is designed to take the principles and mechanisms learned in introductory epidemiology and biostatistics and apply them in the design of epidemiologic studies. The strategy and data collection for studies will be emphasized rather than the methods of statistical analysis. The student will learn how to develop a proposal/grant that addresses the entire array of concerns regarding such studies and propose a realistic, scientifically justified study. (Same as ANAT 869 and NSRG 889.) Prerequisite: HP&M 819 or HP&M 821, and NSRG 886. LEC

HP&M 879 Comparative Health Care Systems (3). Critical examination of the structure and function of health care systems in major, advanced, capitalist countries (e.g., Canada, Japan, United Kingdom, France, Germany, and Sweden) in comparison to the health care system of the United States. Patterns in competing systems and the influence of recent legislation. Prerequisite: Permission of the instructor. LEC

HP&M 883 Cost-Effectiveness and Decision Analysis (3). This course examines techniques that are used in making clinical and management decisions when outcomes are uncertain. The course begins with a review of probabilistic decision making, then explores methods of analyzing choices with uncertain outcomes, stressing the use of decision trees and sensitivity analysis. The course examines cost minimization analysis, cost effectiveness analysis, and cost benefit analysis. (SAME as PRVM 878). LEC

HP&M 884 Clinical and Administrative Data Analysis (3). This course presents advanced techniques in statistical analysis and information management to help understand, process, and use health services data. The three broad areas of health services data will be used: clinical, program, and population-based. Ways in which these data can be used as both management and research tools will be discussed. Implications for improving care and the use of health services will be emphasized. Labs will stress the use of both manipulative techniques such as merging, matching, sorting, and file construction, as well as focus on analysis, using univariate, bivariate, and multivariate techniques. Recent methodology related to outcomes, case-mix, and performance assessment will be presented, and their application to health services administration demonstrated. LEC

The Department of Health Policy and Management offers the Master of Health Services Administration degree.
History and Philosophy of Medicine

No graduate program is offered in this area, but the following course may be taken for graduate credit.

■ History and Philosophy of Medicine Course

H&PM 902 Ethics and the Research Scientist (1). Concepts basic to conducting biomedical research ethically: fraud, plagiarism, and misrepresentation; intellectual property; collection and interpretation of data; conflicts of interest; reporting misconduct by others. Animal research issues, including federal regulatory structure and informed consent. No prerequisites. LEC

Microbiology, Molecular Genetics, and Immunology

Interim Chair: Michael Parmely
KU Medical Center, 3025 Wahl Hall West, Mail Stop 3029
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/microbiology, (913) 588-7010
Graduate Adviser: Joe Lutkenhaus, 3016 Wahl Hall West, (913) 588-7054
Professors: Lutkenhaus, Parmely
Professors Emeriti: Furtado, Kinsey, Suzuki
Associate Professors: Biswas, Zücket
Assistant Professors: Gudima, Hardwidge, Kim, Mir, Qiu, Vines, Yankee
Graduate programs in microbiology and related areas are primarily for students who wish to earn the Ph.D. or combined M.D./Ph.D. degree. The M.A. degree may be granted in appropriate circumstances.

Admission

Application to the Ph.D. and master’s programs in microbiology, molecular genetics and immunology are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and the admission requirements.

M.A. Degree Requirements

Course and Thesis Requirements. Students must demonstrate competence in the content of the IGPBS curriculum and in two of the following areas: Immunology, Virology, and Bacteriology. Each degree candidate must submit a written thesis detailing original laboratory research and defend it orally before a thesis committee.

Ph.D. and M.D./Ph.D. Degree Requirements

Candidates for the combined M.D./Ph.D. degree must meet all requirements for the Ph.D. degree.

Course Requirements. Students must demonstrate competence in the content of the IGPBS curriculum or in the medical basic science curriculum (M.D./Ph.D. student) and in two of the following areas: Immunology, Virology, and Bacteriology. Students should also take an advanced course in the student’s research area. Students also must present literature seminars.

Research Skills. Completion of a research skill is required. This can be fulfilled through didactic work, mastering a laboratory technique, or activities relevant to the student’s dissertation research. Examples of this type of training include courses in statistics, computer programming, radioisotopes, electron microscopy, or instrumentation. In special cases, the research skills requirement may be satisfied by providing evidence of previous training in an appropriate area.

Comprehensive Examination. The student takes an oral comprehensive examination based in part on defense of an original written research proposal. This examination evaluates the student’s ability to write an original research proposal, design experiments, and interpret results in a sound and critical manner.

Dissertation. Doctoral candidates are expected to conduct original research, prepare a written dissertation detailing the results, and defend the dissertation in a final oral examination. It is expected that the research will be published in reputable scientific journals.

■ Microbiology Courses

MICR 808 Immunology (3). Molecular and cellular aspects of immunity. Specific topics will include immunoglobulin and receptor structure/function, attributes of antigenicity, antigen-antibody reactions, immunocompetent cells, cellular interactions, soluble mediators of immune responses and normal and abnormal immune regulation. Prerequisite: Permission of course director. LEC

MICR 820 Bacterial Genetics and Pathogenesis (3). Genetics of bacteria with emphasis on bacterial pathogens. Topics include: gene regulation, recombination, bacteriophages, transposons, genetic exchange, plasmids, genetics of virulence, bacterial adherence and colonization, immune evasion mechanisms, bacterial toxins, vaccines and antimicrobials, re-emerging bacterial diseases. Prerequisite: Permission of instructor. LEC

MICR 825 Virology (3). Molecular biology of animal viruses. Aspects of various virus families to be covered include structure, replication, and host cell responses. Lectures and student seminars. Prerequisite: Permission of the course director. LEC

MICR 830 Seminar in Microbiology (1). Reports on research and literature. LEC

MICR 835 Research in Microbiology (2-3). This course is specifically designed to provide supervised research experience in various laboratories in the department. LEC

MICR 840 Comparative Genomics For Biologists (1). Introduction to evolutionary biochemistry, and sequence comparison; sequence alignments and database searches; biological networks; reconstruction of metabolism and signaling from genome sequence; homology, orthology and paralogy; origin of new genes, homology and analogy in protein structure and function; tree, or perhaps the web, or life; horizontal gene transfer. Prerequisite: Enrolled in IGPBS program or permission of instructor. LEC

MICR 890 Research for M.A. in Microbiology (1-10). This course is designated for thesis research leading to the M.A. degree. LEC

MICR 899 Thesis for M.A. in Microbiology (1-10). Restricted to writing of the dissertation. LEC

MICR 900 Advanced Microbial Physiology (3). Physiology and growth of bacterial cells. Analysis of the current literature relating to microbial physiology presented in a seminar/discussion format. Topics to be covered include protein secretion, microbial development, cellular responses to environmental stresses, DNA replication and segregation, peptide/algycan biosynthesis and cell division. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 920 Advanced Microbial Molecular Genetics: Prokaryotes (3). Topics in genetics with lectures and discussions about recent advances in microbial molecular genetics. The topics include the following with emphasis on genetic aspects: sporulation and differentiation, bacterial pathogenicity, recombination, cell growth and division, DNA replication and site-specific mutagenesis. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 925 Advanced Virology (3). An advanced course dealing with a number of topics of special and current interest in modern virology. Lectures and/or conferences. Prerequisite: MICR 825 or permission of instructor. LEC

MICR 930 Advanced Topics in Microbiology (1-8). An advanced approach to selected topics in any of the major disciplines in microbiology. Readings and conferences, or advanced laboratory techniques. LEC
**Molecular and Integrative Physiology**

Chair: Paul D. Cheney, pcheney@kumc.edu
KU Medical Center, 3011 Wahn Hall East, Mail Stop 3043
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/physiology, (913) 588-7400

Graduate Adviser: Thomas Imig, timig@kumc.edu,
2077 Kansas Life Sciences Innovation Center, (913) 588-7025

Professors: Albertini, Cheney, Enna, Gonzalez, Heckert, Imig, LeVine, Nudo, Smith, Tarr, Tash, Terranova

Professors Emeriti: Sullivan, Voogt

Associate Professors: Belusov, Blanco, Wolfe, Wood

Assistant Professors: Christenson, Geiger, Kumar, Lee, Stanford

Programs range from factors controlling gene expression to whole animal adaptations; the common thread is that all programs endeavor to understand biological function in health and disease.

The program provides outstanding didactic instruction and laboratory experiences that enable students to become effective teachers and independent investigators. The department participates in the IGPBS at KUMC and provides research emphases in cardiovascular biology, cell and developmental biology, molecular and cellular biophysics, cellular and molecular immunology, molecular biology and genetics, neuroscience, reproductive biology, and signal transduction and cancer biology. The program is for the student pursuing the Ph.D. or combined M.D./Ph.D. degree. Degrees are granted to persons who fulfill all requirements.

**Admission**

Application to the Ph.D. and master’s programs in molecular and integrative physiology are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and the admission requirements.

**M.S. Degree Requirements**

Students are admitted to the M.S. program only if they have compelling reasons for pursuing advanced study, but the Ph.D. degree is not practical for them. Course requirements generally are the same as for the Ph.D., but the research component is of more limited scope.

**Ph.D. Degree Requirements**

Students take the core curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences. The curriculum is posted on the IGPBS Web site at www.kumc.edu/igpbs. In most cases, students take additional course work in the fall of the second year before entering full time into a research program.

**Research Skill.** Completion of a research skill is required. This can be fulfilled through didactic work, mastering a laboratory technique, or activities relevant to the student’s dissertation research.

**Examinations and Dissertation.** Following completion of the courses, the student must successfully complete a comprehensive qualifying examination consisting of a research proposal written in the form of a National Institutes of Health grant application, which the student defends orally. The student, with the guidance of his or her dissertation adviser, conducts an original research project. The outcomes of that research are assembled as a written dissertation generally consisting of a compilation of scientific papers submitted by the student for publication. A more traditional thesis format also can be used. The student defends this research in a seminar open to all interested parties.

**PHSL 784 Faculty Research Programs (1).** The new student will be introduced to the faculty research programs. Each faculty member will present his/her research interests using one or more of the following formats: laboratory demonstrations, computer simulations and lectures. The objectives are to assist the new student in selecting his/her area of dissertation research and acquainting the new student with the department research resources. LEC

**PHSL 834 Reproductive Physiology (4).** All aspects of reproductive physiology including an in depth study of ovarian and testicular development/function, neuroendocrine development/function, implantation, placentaion, puberty, pregnancy and fertility regulation are covered. Historical and current scientific literature will be used to support a graduate level text and didactic lectures. Prerequisite: a general endocrinology/physiology course or an equivalent course and consent of instructor. LEC

**PHSL 838 Advanced Topics (1-3).** Special studies designed and arranged on an individual basis to allow a particular subject to be pursued beyond the scope of existing courses or as part of special laboratory work, and conferences with a senior staff member. LEC

**PHSL 840 Advanced Genetic Analysis (3).** This course will focus on principles that underlie genetic analysis, including mutation, complementation, recombination, segregation, and regulation. The genetics of commonly used model organisms such as yeast, flies, worms and mice will be examined, classic genetic screens performed to study stage assembly, cell cycle regulation, sex determination and X-chromosome inactivation will be discussed and modern-day techniques used to study inheritance and gene function in various systems will be analyzed. Human genetic analysis will also be covered, including population genetics, techniques for gene mapping, inherited diseases, genetic testing and gene therapy. Through reading and discussion of scientific literature and problem-based homework and exams, students will learn how to evaluate and interpret genetic data as well as develop and design genetic strategies to solve current biological problems. Prerequisite: Completion of IGPBS Core Curriculum or equivalent, or permission of Course Director. LEC

**PHSL 842 Comprehensive Human Physiology (9).** Advanced course on modern human physiology. The course focuses on organ systems of the human body including nervous, cardiovascular, endocrine, respiratory, reproductive and urinary systems. This course emphasizes the use of modern experimental approaches that take advantage of cellular and molecular technologies. Prerequisite: NONE LEC

**PHSL 844 Neurophysiology (3).** Somatosensory, motor and cognitive function of the brain will be discussed using a combination of lecture and student presentation formats. Current issues and evidence underlying accepted concepts and mechanisms will be emphasized. (Same as NURO 844.) Prerequisite: PHSL 846 or an equivalent course and consent of instructor. LEC

**PHSL 846 Advanced Neuroscience (5).** Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular, and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846, PHCL 846 and NURO 846.) Prerequisite: Permission of course director. LEC

**PHSL 847 Developmental Neurobiology (2).** Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction; Cellular Differentiation; Axon Growth and Guidance; Target Selection; Cell Survival and Growth; Synapse Formation; Synapse Elimination; and Development of Behavior. (Same as ANAT 847 and NURO 847) Prerequisite: Advanced Neuroscience (ANAT 846; NURO 846; PHSL 846) or consent of instructor. LEC

**PHSL 848 Molecular Mechanisms of Neurological Disorders (3).** An in-depth coverage of pathogenic mechanisms in neurological diseases: cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), neurogenic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, NURO 848, and PHCL 848.) Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

**PHSL 850 Research (1-10).** Original laboratory investigation conducted under the supervision of a senior staff member. RSH

The M.D./Ph.D. program at the KU School of Medicine provides an excellent background for students who want to pursue careers in academic medicine.

The KUMC Research Institute is at KU Medical Center, 6003 Wescoe Pavilion, Mail Stop 1039, 3901 Rainbow Blvd., Kansas City, KS 66130, (913) 588-1261, www2.kumc.edu/researchinstitute.

288
by the instructor and fellow students. LEC presentations and students are then given a constructive critique of their presentation. Videotapes are made of the presenations and students are then given a constructive critique of their presentation by the instructor and fellow students. LEC.

**PHSL 899 Master's Thesis (1-5).** Preparation of the formal thesis based on library research or independent research and in partial fulfillment of the requirements for the master's degree. Credits will be given only after the thesis has been accepted by the student's thesis committee. THE.

**PHSL 999 Doctoral Dissertation (1-10).** Preparation of the Dissertation based on original research and in partial fulfillment of the requirements for the Ph.D. degree. Credits will be given only after the dissertation has been accepted by the student's dissertation committee. THE.

---

**Neurosciences**

Co-director: Paul D. Cheney, pcheney@kumc.edu

KU Medical Center, 3011 Wahl Hall East, Mail Stop 3043
3901 Rainbow Blvd., Kansas City, KS 66160 (913) 588-7400

Co-director: Elias K. Michaelis, emichaelis@kdu.edu

Malott Hall, 1251 Wescoe Hall Dr., Room 3048B
Lawrence, KS 66045-7572, (785) 864-4001 or (785) 864-7339


The neuroscience Ph.D. program incorporates the neuroscience faculty at the Medical Center and the main campus in Lawrence. Students earn a Ph.D. in Neuroscience. The Ph.D. program has different tracks based on the student's research interest and the location of the faculty mentor. Neuroscience graduate students at KU Medical Center take a majority of their courses at KUMC and have the option of taking selected courses on the main campus. The reverse is true of students in Lawrence. Students and faculty from both campuses come together during the Neuroscience Seminar series.

**Admission**

Applications to the neuroscience Ph.D. program at the Medical Center are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and the admission requirements. Students may also enroll to the neuroscience program in Lawrence (see Neurosciences in the School of Pharmacy chapter of this catalog).

**Program**

**Curriculum.** At the Medical Center, students begin by taking the courses offered in the Interdisciplinary Graduate Program in the Biomedical Sciences. Students take all the core courses in the IGPBS, which focus on cellular and molecular biology. In addition, students take courses in ethics and professional development. During the first year of graduate studies, students participate in one lab rotation, with the option of any of the faculty. Students choose their lab rotations. At the end of the first year students choose a mentor.

PHSL 846 Advanced Neuroscience
ANAT 847 Developmental Neurobiology
PHSL 844 Neurophysiology
PHSL 848 Molecular Mechanisms of Neurological Disorders
NURO 799 Neuroscience Seminar Series

In addition, many neuroscience courses are offered on the Lawrence campus. Televideo links bridge the distance, and many students take courses on both campuses.

**Examinations.** The comprehensive written and oral examinations are administered during the second year of full-time graduate study. The student writes an NIH-style proposal that describes the proposed dissertation research. The oral portion of the comprehensive examination tests the student’s knowledge base. Before the comprehensive examination, completion of a research skill is required. This can be fulfilled through didactic work, mastering a laboratory technique, or activities relevant to the student’s dissertation research. The goal of the comprehensive examination is to verify that the student has the depth and breadth of knowledge needed to complete the project. After successfully completing the comprehensive examination, the student becomes a doctoral candidate. The student must complete original research and compose a dissertation. The student presents these results in formal seminars and must defend the dissertation to the doctoral committee.

**Courses**

For descriptions of NURO courses, see the School of Pharmacy chapter of this catalog.

**Pathology and Laboratory Medicine**

Chair: Patricia Thomas

KU Medical Center, 2017 Wahl West, Mail Stop 3045
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/pathology, (913) 588-7070

Graduate Adviser: Jay L. Vivian, 1032 Lied, (913) 588-0341

Professors: Jensen, Persons, Soares, Tawfik, Thomas

Associate Professors: Fan, T. Fields, Horvat, Li, Nicot, Wiedemann

Assistant Professors: Behbod, Blanchette, Cheng, P. Fields, Paul, Prochasson, Vivian, Zeitlinger

The department offers a graduate program and research opportunities with emphasis on cell differentiation, cancer biology, gene regulation, and experimental pathology, leading to the M.A., Ph.D. or combined M.D./Ph.D. degree. This curriculum is designed for advanced research study in molecular and cellular biology and experimental pathology.

**Admission**

Applications to the Ph.D. and master's programs in pathology and laboratory medicine are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and the admission requirements. Applicants specifically interested in the pathology and laboratory medicine program should contact Jay Vivian (jivivian@kumc.edu).

**General Requirements.** These requirements must be met for admission: baccalaureate degree, inorganic chemistry, organic chemistry, calculus, physics, biological sciences.

**M.A. Degree Requirements**

All general requirements for the M.A. must be met. Students must complete the IGPBS core curriculum, or equivalent. In addition, students must take a minimum of two semesters of PATH 804 Selected Topics in Signal Transduction (1 credit hour a semester), and PATH 805 Seminars in Pathology (1 credit hour a semester) every year. Students also must have a minimum of 5 credit hours of graduate course work in fields related to molecular and cellular biology and experimental pathology.

**Ph.D. Degree Requirements**

All general requirements for the Ph.D. must be met. Students must complete the IGPBS core curriculum or its equivalent. In addition, students must take a minimum of two semesters of PATH 804 Selected Topics in Signal Transduction (1 credit hour a semester), and PATH 805 Seminars in Pathology (1 credit hour a semester) every year. Students also must have a minimum of
5 credit hours of graduate course work in fields related to molecular and cellular biology and experimental pathology. Completion of a research skill is required. This can be fulfilled through didactic work, mastering a laboratory technique, or activities relevant to the student’s dissertation research. Examples of this type of training include courses in statistics, computer programming, radioisotopes, electron microscopy, or instrumentation. In special cases, the research skills requirement may be satisfied by providing evidence of previous training in an appropriate area.

■ Pathology and Laboratory Medicine Courses

PATH 800 General Pathology (7). The basic mechanisms of human disease, including cellular pathology, inflammation, diseases of immunity, neoplasia, infectious and inflammatory diseases, and aging are considered through the mechanisms of lectures, small-group problem based care study and autopsy presentation. (Same as PAON 850) Prerequisite: Consent of instructor. LEC

PATH 801 Systemic Pathology (9). Human disease is studied by organ systems to include cardiovascular, hematologic, renal, respiratory, gastrointestinal, genitourinary, musculoskeletal, endocrine, and nervous system diseases. The pathobiology of all major diseases occurring within each organ system are considered by topics, problem based case study and autopsy participation. Since final comprehensive examination at the end of Pathology I will include material from both Pathology I and Pathology II. Prerequisite: Successful completion of Pathology I.

PATH 802 Special Pathology (6). A detailed study of diseases involving the endocrine, immune, muscular, and skeletal systems. Prerequisite: PATH 800 and courses in histology, biochemistry, and physiology, or equivalent. LEC

PATH 803 Stem Cell Biology (2). Current concepts in the study of stem cells, and the clinical potential in modern disease treatment. Students will learn concepts of stem cell biology, regulation of pluripotency, and differentiation potential; experimental isolation and manipulation; and clinical application of isolated stem cells. Current scientific literature will be used to highlight recent advances in stem cell biology. Special emphasis will be placed on the ethical and legal issues surrounding the use of stem cells of both adult and embryonic origin. Prerequisite: Course in cell biology (IGPBS module 4, or equivalent); consent of instructor. LEC

PATH 804 Selected Topics in Signal Transduction (1). A survey of the basic principles and contemporary literature of signal transduction pathways involved in cancer development. Developmental biology. Faculty lecture and student presentation. Prerequisites: PATH 800 and courses in cell biology, biochemistry, and molecular biology. Special emphasis will be placed on the ethical and legal issues surrounding the use of stem cells of both adult and embryonic origin. Prerequisite: Course in cell biology (IGPBS module 4, or equivalent); consent of instructor. LEC

PATH 805 Seminars in Pathology (1). Presentation of Pathology Department graduate student research-in-progress. Students will conduct a one-hour seminar in which updates of their current research project(s) in pathology will be reported. The seminars are interactive and students are encouraged to participate in discussion of the presented work. Prerequisite: Completion of the IGPBS core curriculum and consent of instructor; consent of instructor. LEC

PATH 806 Epigenetics (2). Current concepts in epigenetic regulation of transcription, including its involvement in disease. Current scientific literature will be used to examine recent advances in the role of epigenetic regulation in transcription and its impact on cellular processes including growth, differentiation, development, and disease. Students will learn the fundamental concepts of epigenetic regulation and the role of the epigenetic regulation in various gene expression systems. The role of epigenetics in long-range DNA interactions will also be studied, with an emphasis on enhancer, silencer, and locus control region function. Recent advances in the role of epigenetics in disease, including cancer will also be examined. The course will examine current experimental methods to study epigenetics and gene regulation. Prerequisite: Completion of the IGPBS core curriculum or equivalent; consent of instructor. LEC

PATH 899 Master’s Thesis (1-7). THE

PATH 903 Pathology Techniques Laboratory (1-3). A laboratory course in which students may select no more than three of the following: electron microscopy, fluorescence microscopy, cell typing, morphometrics, immunohistochemistry, flow cytometry, and a research laboratory technique. LAB

PATH 905 Cellular Biology and Pathophysiology of Bone (3-5). Normal bone development, ultrastructure of bone, and the calcification mechanism. Developmental and genetic abnormalities of bone including dwarfism and osteogenesis imperfecta. Metabolic bone diseases including osteoporosis, Paget’s disease and osteomalacia. Methods of diagnosis by morphometry of undecalcified bone biopsy. Common primary bone tumors, and the mechanism of bone loss or bone overgrowth caused by metastatic malignant tumors. There will be practical laboratory portions. Prerequisite: Consent of instructor. LEC

PATH 907 Infection and Immunity (1). Microbial factors, host reaction, and disease. Emphasis on recovery from infection, response to inflammation, the resultant clearance of microbes, or the development of chronic infection. Hypersensitivity phenomena will also be considered in the light of data from transplantation immunity. Prerequisite: PATH 800. LAB

PATH 911 Research in Pathology (1-10). RSH

PATH 912 Advanced Topics (1-5). Offered by arrangement. Prerequisite: PATH 800, PATH 801, and PATH 802. IND

PATH 915 Advanced Pathology (3). A lecture and literature review course in which molecular, subcellular, and supracellular organization and function are considered in normal and disease states. Prerequisite: PATH 800. LEC

PATH 930 Carcinogenesis and Cancer Biology (3). Multidisciplinary approach. Cancer pathology, Neoplasia, Genomics, Carcinogen metabolism, Signal Transduction, Apoptosis, Initiation and promotion. Tumor Immunology. Cell proliferation. Protooncogenes and suppressor genes. Hormonal carcinogenesis. Cancer epidemiology, Angiogenesis. Dietary and environmental causation and prevention. Cancer in various organ systems. (Same as PHCL 899 and PTOX 899) Prerequisite: Completion of one of the following: IGPBS modules 1-4 or equivalent or permission of instructor. LEC

PATH 999 Doctoral Dissertation (1-7). THE

Pharmacology, Toxicology, and Therapeutics

Chair: Curtis Klaassen
Graduate Student Adviser: Bruno Hagenbuch
Graduate Studies Adviser: Hartmut Jaeschke
KU Medical Center, Mail Stop 1018
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/pharmacology, (913) 588-7500
Professors: Hagenbuch, Jaeschke, Klaassen, J. Li, Pazdernik, Rozman, Sittampalam, Wan, Weir, Zhu
Professors Emeriti: Bunag, Cheng, Doull, Norton, Poisner, Ueyki
Associate Professors: Levant, McCayar, Reed
Assistant Professors: Apte, Chen, Copple, Ding, Guo, Krishnamurthy, Luyendyk, Ma, Robertson, Zhong

The Department of Pharmacology, Toxicology, and Therapeutics offers programs leading to Ph.D. and combined M.D./Ph.D. degrees in either of two areas. A Ph.D. degree may be earned in pharmacology with specialization in a number of subfields. The department is one of a very few nationally also to grant the Ph.D. degree in toxicology, again with opportunities for specialization in several subfields.

Because the emphasis in training students is to provide the broad background needed in pharmacological and toxicological sciences, the program encompasses a spectrum of the biomedical sciences. This includes participation in the IGPBS core curriculum as well as appropriate electives in other basic sciences.

Research areas emphasized in both pharmacology and toxicology programs are transporters, drug metabolism, hepatotoxicity, pharmacogenomics, metabonomics, gene regulation, nuclear receptors, epigenetics, pain, neurodevelopment, etc.

Graduate work is primarily for students planning to earn the Ph.D. degree. Although a master’s degree is offered, the broad background required for work in pharmacology and toxicology makes only the doctoral program appropriate for most students.

Admission

Applications to the Ph.D. program in pharmacology or toxicology are facilitated through the Interdisciplinary Program in Biomedical Sciences. See the IGPBS section for a description of the program and admission requirements.

Ph.D. Degree Requirements

In addition to general requirements, students must meet the following departmental requirements:

Course Requirements for the Ph.D. in Pharmacology

1. Credit hours equivalent to at least three full academic years.
2. All courses of the Interdisciplinary Graduate Program in Biomedical Sciences core curriculum, which covers biochemistry, molecular biology, LEC

3. PHCL 880 Essentials of Pharmacology, PHCL 898 Principles of Pharmacology, PTOX 917 Disposition of Xenobiotics, PTOX 918 Toxicology

4. At least two elective courses (at least two credit hours each).
5. Other courses considered necessary by sponsor and dissertation committee.

THE UNIVERSITY OF KANSAS 2009-2011
Course Requirements for the Ph.D. in Toxicology

1. Credit hours equivalent to at least three full academic years.
2. All courses of the Interdisciplinary Graduate Program in Biomedical Sciences core curriculum, which covers biochemistry, molecular biology, and cell biology.
3. PHCL 880 Essentials of Pharmacology, PTOX 898 Principles of Toxicology, PTOX 917 Disposition of Xenobiotics, PTOX 918 Toxicology, PTOX 940 Techniques in Industrial Toxicology.
4. At least two elective courses (at least two credit hours each).
5. Other courses considered necessary by sponsor and dissertation committee.

Foreign Language. Skill in one foreign language (computer language included) or a research skill is required.

Examinations

1. One comprehensive examination. To be taken after completion of most course requirements and the language requirement (normally during the third year of full-time graduate study).
2. Final examination. To be taken after all other requirements, including the dissertation, are completed.

Dissertation

<table>
<thead>
<tr>
<th>Pharmacology Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCL 761 General Principles of Pharmacology (1). General principles of pharmacology, including pharmacokinetics, pharmacodynamics, adverse effects, pharmacotherapeutics plus miscellaneous agents (antacids, cathartics, biologics). Open to advanced B.S. students and graduate students in Nursing, Allied Health, and other health related programs. Independent study program with use of computer assisted instruction, textbooks, syllabi, consultation with staff and exams as primary teaching instruments. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC</td>
</tr>
<tr>
<td>PHCL 762 Pharmacology of the Autonomic Nervous System (1). General principles of the autonomic nervous system, cholinergics, muscarinics, nicotinics, neuromuscular blockers, beta adrenergics, alpha adrenergics, and miscellaneous ANS agents. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. LEC</td>
</tr>
<tr>
<td>PHCL 763 Cardiovascular-Renal Pharmacology (1). Antihypertensives, antiarrhythmics, vasodilators, cardiac glycosides, serotonin, histamine, polypeptides, diuretics, antilipidemics. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. LEC</td>
</tr>
<tr>
<td>PHCL 764 Pharmacology of the Central Nervous System (1). General principles of the central nervous system, neurotransmitters, hallucinogens, depressants (hypnotics and sedatives), general and local anesthetics, antiparkinson agents, tranquilizers, analgesics and anticonvulsants. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. LEC</td>
</tr>
<tr>
<td>PHCL 765 Chemotherapy (1). Principles of chemotherapy, sulfonamides, penicillins, aminoglycosides, anticancer and antifungal agents, antimalarials, broad spectrum antibiotics, antiarthritic agents, and antipsychotics. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. LEC</td>
</tr>
<tr>
<td>PHCL 766 Blood-Endocrine Pharmacology (1). General principles of endocrine function and use, thyroid drugs, insulin, sex hormones, oxotocics, adrenal steroids, antifungal agents, blood drugs, anticancer and vitamins. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC</td>
</tr>
<tr>
<td>PHCL 767 Toxicology (1). General principles of toxicology, clinical toxicology, solvents, metals, gases and dusts, corrosives, plant and animal toxins, radiations, miscellaneous. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC</td>
</tr>
</tbody>
</table>

The Mid-America Poison Control Center offers help and advice 24 hours a day through a toll-free telephone service. Call (800) 222-1222 or in Kansas City, Kansas, 588-6633, or visit www.kumed.com/poison.
toxicants, stereoisomerism, receptor theory, dose-response relationships, agonists and antagonists, absorption, pharmacokinetics, and side effects of drugs. LEC

PHCL 899 Thesis in Pharmacology (1-10). For students in a master’s program in pharmacology. THE

PHCL 902 Techniques and Experimental Methodology (3). A laboratory course designed to acquaint the student with research methods in a number of specific areas in pharmacology. LAB

PHCL 911 Graduate Pharmacology Core: Chemical (2). Physical, chemical, and stereochemical aspects of drug action. Includes discussions of receptor theory, methods used in receptor studies and drug design. Prerequisite: PHCL 888 or permission from the Department of Pharmacology. LEC

PHCL 912 Graduate Pharmacology Core: Neuropharmacology (2). Principles of nerve transmission. Emphasis is placed on the central nervous system. Includes a discussion of the neurochemical aspects. Prerequisite: PHCL 888 or permission from the Department of Pharmacology. LEC

PHCL 913 Graduate Pharmacology Core: Cardiovascular Pharmacology (2). Action of drugs on the heart and vascular system. Emphasis will be placed on physiological and biochemical mechanisms of drug action. Prerequisite: PHCL 888 or departmental permission. LEC

PHCL 914 Graduate Pharmacology Core: Immunopharmacology (2). Designed to acquaint students with the actions of drugs on neogenesis and manifestation of the immune response. Drug effects on T and B lymphocytes. Anti-inflammatory drugs. Prerequisite: PHCL 888 or departmental permission. LEC

PHCL 915 Graduate Pharmacology Core: Cellular Pharmacology (2). Discussion of drug effects on physiological homeostatic mechanisms. Includes hormones, polypeptides, histamine, serotonin, acetylcholine, catecholamines, and kinins. Prerequisite: PHCL 888 or departmental permission. LEC

PHCL 916 Graduate Pharmacology Core: Cellular Pharmacology (2). Drug action on cells and subcellular organelles. Drug effects on nucleic acid synthesis, protein synthesis, and cell adhesion. Drug effects on tissue cultures. Prerequisite: PHCL 888 or departmental permission. LEC

PHCL 924 Clinical Pharmacology (5). Designed to give practical and theoretical experience with drug trials in humans. Includes animal experimentation when warranted. Clinical principles of drug therapy will be emphasized. IND

PHCL 939 Carcinogenesis and Cancer Biology (3). Multidisciplinary approach. Cancer pathology. Mutagenesis, Genetics, Carcinogen metabolism. Signal Transduction, Apoptosis, Initiation andpromotion, Tumor Immunology, Cell proliferation, Protooncogenes and suppressor genes. Hormonal carcinogenesis. Cancer epidemiology. Dietary and environmental causation and prevention. Cancer in various organ systems. Prerequisite: PHCL 939 and PTOX 918. Prerequisite: Completion of one of the following: IGPBS modules 1-4 or equivalent or permission of instructor. LEC

PHCL 941 Neuro- and Immunopharmacology (2). Principles of basic, peripheral and central nervous system pharmacology and topics in immunopharmacology and neuroimmunopharmacology. Prerequisite: PHCL 941 or permission of course director. LEC

PHCL 942 Cardiovascular and Endocrine Pharmacology (2). Pharmacological principles of drug actions on the endocrine and cardiovascular systems. This includes the effects of drugs on the interactions of hormones and autoinhibitor with the cardiovascular system. Prerequisite: PHCL 941 or permission of Course Director. LEC

PHCL 990 Research for Dissertation in Pharmacology (1-10). Prerequisite: PHCL 890. RSH

PHCL 999 Dissertation in Pharmacology (1-10). Prerequisite: Open to students of advanced standing enrolled in the doctoral program in pharmacology. THE

Toxicology Courses

PTOX 830 Introduction to Clinical and Translational Cancer Research (3). Instruct students in developmental steps used in translating a basic science experiment with clinical applications into a proof of concept application and human trial. Multidisciplinary approach; lectures from faculty in Pharmacology, KU Cancer Center, KUMCRI. Curriculum: Levels of evidence-clinical impact, Pre-Clinical modeling, In-Vivo studies and Animal models, Cancer Drug Development-Pharmacokinetics and toxicity, Pre-Clinical Proof of Concept and FDA, Creating a Pilot Study, Biostatistics 101, Phases of Clinical Trials, Data Collection, Support Staff, Regulatory and DSMBs, IRB and HIPAA, Funding Study: Grants and Parma, Advertising study and meeting accrual goals, Goals of Phase I study, Goals and Objec- tives of Phase II Efficacy study, Phase 2 Multicenter Study: Value of Numbers and Utilizing Cooperative Groups. Prerequisite: Completion of first 2 years of Med School or graduate school, or enrollment in M.D./Ph.D. program. Students no meeting one of these criteria will require permission from course instructor. LEC

PTOX 841 Molecular and Cellular Toxicology (4). Molecular foundations of chemical action, including structure of chemicals, kinetics and consequences of chemical-cellular-interactions, and methods for characterizing receptors, and receptor-mediated phenomena. Prerequisite: Permission of course director. LEC

PTOX 887 Toxicologic Pathology (4). Introductory pathology course for graduate stu- dents preparing for a career in basic toxicology research. Topics to be presented and discussed include: cell injury, inflammation, repair and regeneration, immunopathol- ogy, neoplasia, tumor pathology, respiratory pathology, liver pathology, nephropathol- ogy, miscellaneous organ pathology, and lab animal clinical chemistry. LEC

PTOX 889 Research in Toxicology (1-10). Introductory pathology course for planning on being research toxicologists. Topics to be presented and discussed: cell injury, inflammation, repair and regeneration, immunopathology, neoplasia, tumor pathology, respiratory pathology, liver pathology, nephrology, miscellaneous organ pathology, and lab animal clinical chemistry. LEC

Preventive Medicine and Public Health

Kansas City: Chair: Edward Ellerbeck M.P.H. Director: Won S. Choi

MU Medical Center, 4004 Robinson Hall, Mail Stop 1008
3901 Rainbow Blvd., Kansas City, KS 66160
http://wichita.kumc.edu/prevmed
(913) 588-2720

Professors: Ellerbeck, Lai, Mayo, Neuberger

Professors Emeriti: Chin, Jerome

Associate Professors: Choi, Richter, Shireman

Assistant Professors: Befort, Cupertino, Daley, Edmunds, Engelman, He, Keghly, Mahnen, Nollen, Yeh

Research Assistant Professor: Faseru

Research Instructor: Nazir

Wichita: Chair: Douglas D. Bradham M.P.H. Director: Suzanne Hawley

The University of Kansas School of Medicine–Wichita
1010 N. Kansas Ave., Wichita, KS 67214-3199
http://wichita.kumc.edu/prevmed
(316) 293-2693

Professors: Bradham, Dismuke

Clinical Associate Professor: Early

Clinical Assistant Professor: Assi

Associate Professor: Uhlig

Assistant Professors: Ablah, Hawley, Paschal, Wetta-Hall

Teaching Associates: Chesser, Copas, Hart

Research Instructors: Brown, Johnston

The Departments of Preventive Medicine and Public Health on the Kansas City and Wichita campuses offer a Master of Public Health degree. The M.P.H. program serves traditional graduate students and working health professionals who seek to enhance their ability to assess and respond to the health needs of communities and populations. The M.P.H. degree program is accredited by the Council on Education in Public Health.

http://wichita.kumc.edu/prevmed

THE UNIVERSITY OF KANSAS 2009-2011

292
Public Health Admission

Admission to the M.P.H. program is competitive. Students may apply in either Kansas City or Wichita. Admission requires a baccalaureate degree from a regionally accredited institution. An undergraduate grade-point average of 3.0 on a 4.0 scale (or its equivalent) is required for regular admission. An official copy of academic transcripts from all post-secondary institutions attended must be submitted at the time of application. Demonstration of one or more years of responsible work experience in the health field or a degree in a recognized health profession or other evidence of training or experience that indicates adequate preparation for the M.P.H. curriculum is preferred.

Applicants who have not earned doctoral degrees in the United States must submit official scores on the Graduate Record Examination or other professional test scores (such as the Graduate Management Admission Test, Medical College Admission Test, Law School Aptitude Test) that are not more than five years old. Applicants whose native language is not English also must submit scores on the Test of English as a Foreign Language that are not more than two years old. No applicant with a score below 23 on any section of the computer-based (CBT) or internet-based (IBT) TOEFL examination or 57 on the paper-based TOEFL or equivalent examination will be considered. See www2.kumc.edu/aa/gradstudies/grad_adm.htm for information.

All M.P.H. applications must be supported by three letters of recommendation from employers, instructors, or other persons who can assess the applicant’s academic and professional potential. The applicant must submit a résumé or curriculum vitae and is asked to prepare a personal written statement that describes his or her career goals and motivation for seeking postgraduate training in public health.

M.P.H. Degree Requirements

Students must complete at least 42 graduate credit hours as prescribed by the department. Students must complete 15 hours in specified core courses in epidemiology, environmental health, public health administration, biostatistics, and the social and behavioral sciences. Students must complete 17 credit hours in elective courses approved as part of the student’s academic program. Students must complete 6 credit hours in a capstone sequence based on a seminar-long practicum in a public health agency or similar organization followed by preparation and defense of a written project report developed from an activity undertaken as part of the practicum.

Students may undertake Master of Public Health studies on a part-time or full-time basis. Most students attend part time while continuing to work as health professionals.

Dual/Joint Degree Programs

M.D./M.P.H.
This is a five-year program in which the medical student completes the requirements for the M.P.H. degree in one year. This can be accomplished either between the second and third, or between the third and fourth, years of medical school. Students must complete the M.D. degree requirements of the School of Medicine. They complete the M.P.H. in three semesters, beginning in the summer (June), and proceeding through fall (August) and spring (January), and finishing by the end of May.

M.S.N./M.P.H.
This interdisciplinary education experience offered by the School of Nursing and the Department of Preventive Medicine and Public Health combines courses from the M.S. in Nursing and the M.P.H. Please contact the respective departments for more information.

Ph.D./M.P.H.
The Department of Applied Behavioral Science on the Lawrence campus offers a 72-credit-hour doctoral program in behavioral psychology. Students learn about an array of content areas and theoretical perspectives and achieve proficiency in behavioral analysis, developmental studies, or behavioral intervention. Both the Departments of Applied Behavioral Science and of Preventive Medicine and Public Health promote community/public health and development through collaborative research, teaching, and service. The joint Ph.D./M.P.H. is ideal for students interested in prevention through community and public health. Distinct from other degree programs, many M.P.H. courses. Students must apply for admission to the M.P.H. and Ph.D. programs separately. Applications are reviewed by the respective admissions committees. Students admitted to the joint program complete the 42-hour M.P.H. requirements in addition to the Ph.D.

Preventive Medicine and Public Health Courses

PRVM 800 Principles of Epidemiology (3). Basic concepts of epidemiology and methods for identification of factors influencing health and disease in human populations. Considerations are centered on physical, biological, psychosocial and cultural factors in relation to infectious and non-infectious diseases; interactions between agent, host, and environmental factors as determinants of health and disease; application of the epidemiologic approach to health services; retrospective and prospective analysis of morbidity and mortality data. LEC

PRVM 802 Principles of Epidemiology Lab (1). This course is an additional supplement to PRVM 800 Principles of Epidemiology course. We will review and discuss the major principles of epidemiology through the use of the medical literature. This course is designed for students to obtain practical training in epidemiologic concepts and methods. Prerequisite: Concurrent enrollment in PRVM 800. LEC

PRVM 803 Introduction to Clinical Research (1). Course will provide a comprehensive introduction to clinical research. This course will address how to develop clinical research questions including protocol design and the factors that should be considered in initiating a clinical research study. This will include biostatistical considerations, the recruitment of study participants, regulatory issues, and data management, and defining measures and instruments. Students will gain knowledge of how to define clinical research among the various institutional entities involved with clinical research at the University of Kansas Medical Center such as Research Institute (RI), General Clinical Research Center (GCRC) and the Human Subjects Committee (HSC). Additionally, one component of the course will focus on how to apply for funding (grantsmanship), critical appraisal of research studies, and how to present research data. Prerequisite: Consent of instructor. LEC

PRVM 804 Principles of Statistics in Public Health (3). Introductory course concerning the concepts of statistical reasoning and the role of statistical principles as the scientific basis for public health research and practice. Prerequisite: Permission of instructor. LEC

PRVM 805 Public Health Seminar (1). This course will focus on public health practice. Guest lectures from the State and local public health agencies will present problems and how these problems are being addressed. Topics are expected to vary somewhat from year to year, depending on the priorities of the agencies. However topics might include such issues as smoking prevention, automobile accidents, foodborne outbreaks, lead poisoning in children, autism in children, sexuality transmitted diseases diabetes, cancer control, nutrition, cardiovascular diseases, bioterrorism, legal issues and administration of public health. Each topic will be covered in two separate lectures with the second week concentrating on the epidemiology of the problem and the second week concentrating on control of the problem FLD

PRVM 806 Special Topics: (1-4). In-depth, individualized investigation of special problems in community health. Designed especially for students with limited background in community health. Prerequisite: Permission of instructor. RSH

PRVM 807 Field Epidemiologic Investigation (2). The student will investigate the outbreak of an infectious or chronic disease. This disease could be caused by agents in food, water, or air (etc.). The aim is to gain practical experience in epidemiologic investigation techniques which can later be presented at a seminar. Assignments will be made to state or local health departments, other governmental agencies, ongoing faculty research projects or other investigations. Prerequisite: PRVM 800. RSH

PRVM 808 Clinical and Translational Research Seminar (1). This seminar will present locally and nationally recognized clinicians and researchers to discuss various areas of clinical research. The course is designed to expose students to a variety of ongoing research and features speakers from a variety of disciplines including physicians, epidemiologists, biostatisticians, behavioral scientists, nursing faculty, nursing students, medical students, allied health faculty and others. Prerequisite: Permission of instructor. LEC

PRVM 809 Introduction to Public Health (3). An introduction to contemporary public health principles and practice addressing the history, philosophy, and scope of public health practice with emphasis on current organization and administration of programs. Focus will be on recent developments and trends, public health law and regulations and the interface of public and other related systems. Prerequisite: Permission of instructor. LEC

PRVM 810 Clinical Trials (3). The design, implementation, analysis, and assessment of controlled clinical trials. Basic biostatistical concepts and models will be emphasized. Issues of current concern to trialists will be explored. Prerequisite: PRVM 804. Principles of Statistics in Public Health, or permission of instructor. LEC

PRVM 811 Introduction to Pharmaepidemiology (3). Pharmaepidemiology is the application of the principles of epidemiology to the study of medications and the effects of health. Evaluating a drug’s effects commences when a chemical entity becomes a drug candidate, intensifies through clinical trials, and continues after products reach the market. These studies are critical for supporting the proper use of medications in terms of efficacy, effectiveness, and cost-effectiveness. This
course provides a broad introduction to the principles of pharmacoeconomics. Students will present a research proposal to the class. This course is scheduled for the spring semester. LEC

PRVM 812 Public Health Biostatistical Laboratory (1). Complements Biometry 811 and Principles of Statistics in Public Health, PRVM 804. Problem-based laboratory that emphasizes the application of statistical methodology to public health practice and research. Special emphasis is placed on how statistical methods are used to address public health issues through computer analysis of actual public health/epidemiologic data sets and through review of statistical aspects of the public health literature. Prerequisite or Corequisite: BMTR 811, PRVM 804 or PRVM 814. LEC

PRVM 813 Hospital Infection Control (2). Study of infection control problems in the hospital setting. Students will analyze actual cases. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 814 Fundamentals of Biostatistics I (3). First-semester course of a two-semester introductory statistics course that provides an understanding of the proper application of statistical methods to scientific research with emphasis on the application of statistical methodology to public health practice and research. This course focuses on basic principles of statistical inference with emphasis on one or two sample methods for continuous and categorical data. This course fulfills the core biostatistics requirement. Prerequisite: Calculus or Permission of Instructor. LEC

PRVM 815 Surveillance and Control of Infectious Disease (3). This course is concerned with the public health aspects of infectious diseases of importance in the United States. Emphasis will be given to surveillance and control of reportable diseases transmitted via person to person spread. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 816 International Health (3). This course is divided into seven sections: 1) Global health introduction, 2) Health inequalities and the socio-economic context of disease, 3) Maternal and child health, the health of special populations, 4) Infectious diseases, 5) Environmental health, and the health of effects of environmental change, 6) Global health, and 7) Global health priorities. Prerequisite: PRVM 800 Principles of Epidemiology or permission of the department/instructor. LEC

PRVM 817 Fundamentals of Biostatistics II (3). Second level statistics course that provides an understanding of more advanced statistical methods to scientific research with emphasis on the application of statistical methodology to public health practice, public health research, and clinical research. Special focus will be upon the utilization of regression methodology and computer applications of such methodology. Prerequisite: PRVM 814. LEC

PRVM 818 Social and Behavioral Aspects of Public Health (3). Examination of the characteristics, beliefs and behaviors of groups and individuals concerning health issues as a basis for understanding the role of these factors in public health. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 821 Research Methods in Public Health (3). This is an introductory behavioral research methods course. Students will learn about research designs, hypothesis formation, measurement, sampling, ethical issues in research, and pragmatic and research issues with evaluating behavioral interventions. Students will also learn how to critically evaluate and develop behavioral randomized clinical trials. Prerequisites: None. Social and Behavioral Aspects of Health and an Introductory statistics course are recommended but not required. LEC

PRVM 823 Field Experience in Community Health Education (1-3). Internships with community agencies, community preceptors in areas of concentration. Prerequisite: Permission of instructor. FLD

PRVM 824 Health Hazard Appraisal and Risk Reduction (1-3). Study and practice in health hazard appraisal and risk reduction, including knowledge of current approaches to data gathering and analysis. Prerequisite: Permission of instructor. LEC

PRVM 825 Child and Family Health (3). Family, maternal, and child health problems will be addressed. Topics will include prenatals care (maternal health and habits); fetal growth and development; nutrition; immunizations; development (speech, behaviour); developmental disabilities; adoption; adolescence; child abuse; family as a support system; long-term medical and social outcomes of chronic illness/disability in children. Subjects are covered through lecture, discussion and field visits under the supervision of a pediatrician. Prerequisite: Permission of instructor. LEC

PRVM 826 Financing Health Care Services (3). This course examines the principles of financial analysis and budget management in health care systems. It is designed as an overview course for students with minimal background in financial management theory and emphasizes practical applications in health care settings of financial organization, sources of operation revenues, budgeting and cost allocation, and financial management systems. Prerequisite: Permission of instructor. LEC

PRVM 827 Public Health Administration (3). This course provides students with an in-depth understanding of the core functions of public health: assessment, policy development, and assurance. It uses both theoretical and practical material to develop students’ administrative skills necessary for successful practice of public health. Particular emphasis is placed on case studies which examine how public agencies use public and private resources most efficiently, and equally to maintain or improve the health populations. (Same as HPM 861.) LEC

PRVM 828 Public Health Program Development and Management (3). Development of basic program management skills as applied to the public health environment. The course will be organized into three components: 1) the public health environment of the United States; 2) the development of public health programs; and 3) public health management. Prerequisite: Permission of instructor. LEC

PRVM 829 Primary Care Research Seminar (1). The investigative research process will be reviewed using a three-part strategy. The seminar provides information about specific aspects of research design, methodology, and administration. Seminars will be supplemented with small group discussions related to developing and completing a research protocol and presentations by faculty to highlight existing research studies. Students may enroll in PRVM 829 for up to 4 credit hours over successive semesters. The Seminar is designed for Primary Care and graduate students. Prerequisite: Consent of instructor. LEC

PRVM 830 Environmental Health (3). This course will identify specific health effects of environmental contaminants and discuss principles of prevention. Specific problem areas will include air pollution, water pollution, solid waste disposal, food preservation, radiation, industrial hygiene, occupational skin and lung diseases, chemical carcinogens accidents, an agricultural health and safety. A number of guest lecturers and field trips will be utilized. LEC

PRVM 831 Research Methods in Primary Care (2). A basic introduction to primary care research with a central focus on developing a framework for planning, designing, and conducting a research investigation. A written prospectus for a research project will be developed by each student. The Seminar is designed for graduate students. Prerequisite: Consent of instructor. LEC

PRVM 832 Environmental and Occupational Epidemiology (2). Epidemiological concepts applied to problems in environmental and occupational health. Theoretical issues include extrapolation from high to low doses, extrapolation from animals to man, synergism, multiple exposures, sensitive populations, and control (comparison) groups. Prerequisite: Permission of instructor. LEC

PRVM 833 Public Health Policy (3). Explore the political forces determining health policy. Critical analysis of key case studies in Public Health are used to study policy formulation, implementation through legislation and other strategies, and policy modification. Issues addressed include historical precedent, problem emergence, agenda setting, windows of opportunity, the politics of naming, framing, funding strategies, coalition development, the role of the civil service, public mobilization, and organization response. Prerequisite: Permission of instructor. LEC

PRVM 835 Evaluation Methods in Public Health (3). Principles and procedures used to evaluate health promotion and disease prevention programs. Includes data collection tools, instrumentation, data analysis, and evaluation designs. Case studies of disease prevention literature on evaluation will be analyzed. Prerequisite: Permission of instructor. LEC

PRVM 836 Epidemiology in Aging (3). An overview of the aging process, review of current knowledge of epidemiology of selected diseases, such as dementia and osteoporosis, and fall that primarily affect aging individuals. Emphasis on epidemiologic designs, methods, and issues (e.g., low response rate and measurements) that are pertinent to research on aging individuals. Prerequisite: PRVM 800, BMTR 811/PRVM 804, or permission of instructor. LEC

PRVM 837 Children's Environmental Health (3). Web-based course. Children rely on adults to protect them from hazards. Are we doing as much as we should? Are certain health problems in children related to environmental contamination? This course reviews and applies concepts in epidemiology, toxicology, reproductive health, and childhood development. Important children’s health problems such as asthma, attention deficit disorder, and others are addressed. Students apply principles of health communication in a project designed to prevent environmental health problems among children. Prerequisite: PRVM 800 Principles of Epidemiology. LEC

PRVM 838 Reproductive Epidemiology (3). Epidemiologic concepts applied to problems in reproductive health of men and women. Critical analysis of epidemiologic studies on sociocultural, individual and pregnancy-specific risk factors to reproduction. Field trips will be used to explore methods to reduce adverse repro...
Preventive Medicine & Public Health

Graduate Catalog

295

Ductive health outcomes in populations (worksites, managed care organizations, local health departments). M.P.H. students will undertake a service-learning project focused on preventing adverse reproductive outcomes in a defined population. LEC

PRVM 839 Community-Oriented Primary Care Epidemiology (3). Overview of how population-based epidemiological concepts are applied to primary care settings, within the framework of public health. M.P.H. students will undertake a similar project focused on public health outcomes in a defined population. LEC

PRVM 840 Clinical Epidemiology (3). Application and elaboration of epidemiological principles in the context of clinical decision-making; design and interpretation of studies relating to diagnosis, prognosis, prevention, and therapeutics; techniques of economic analysis and meta-analysis; use of clinical epidemiology to develop practice guidelines. Prerequisite: Permission of instructor. LEC

PRVM 841 Advanced Epidemiology I: Methods in Cross-Sectional and Case-Control Studies (3). Application of principles of epidemiology and the techniques of statistical analysis to the solution of epidemiological problems. Emphasis will be placed on theory and application of various statistical techniques in the analysis of epidemiological data. Students will be oriented toward application and interpretation of various methodologies. Skills necessary for thesis preparation will also be addressed. Prerequisite: PRVM 808, SAS, or PRVM 814. LEC

PRVM 842 Advanced Epidemiology II: Methods in Longitudinal Studies (3). This course will concentrate on concepts and application of various statistical techniques in analysis of epidemiological data. Topics include: 1) design of studies, 2) evaluation of data, 3) analysis of cohort studies, 4) clinical trials, and 5) community trials. Students will be oriented toward application and interpretation of various methodologies. Prerequisite: Permission of instructor. LEC

PRVM 843 Obesity and Public Health (3). Obesity is becoming epidemic and pandemic throughout the world. What are the personal health consequences of this phenomenon? Are we as focused as we should be on the effects of this growing problem? This course will introduce students to the body of research that defines its etiology and public health effects: including issues of bias and stigmatization. The course further explores the epidemic, and future predicted consequences of obesity and then examines personal models of treatment followed by examination of public health efforts to date. Prerequisites: Core courses in research design and statistical methodology. Students will apply principles of behavioral change and communication to develop proposed public health approaches to ameliorating the obesity problem in children and adults. Prerequisite: PRVM 808. Principles of Epidemiology and PRVM 818: Social and Behavioral Aspects of Public Health, or permission of instructor. LEC

PRVM 844 Organization, Financing, and Delivery of Health Care (3). This course will demonstrate an understanding of the difference between health care and medical care and the place of medical care in the economic system; the role of societal economic factors in societal decision making; the role of demand and supply of medical care services; the interpersonal relationship between the buyer and provider; the role of government in the health care system; and the role of government in the health care system. LEC

PRVM 845 Cultural Competency in Public Health (3). This course provides students with a broad range of contemporary research and writing in the area of cultural competency in public health as it relates to health disparities and health interventions. Specific attention will be paid to examining self-awareness, developing cross-cultural competence, and identifying and utilizing culturally appropriate strategies in health promotion and prevention. Students will be introduced to the medical model as a framework for understanding how culture operates as a critical variable in health behaviors, planning health promotion and disease prevention strategies, and in addressing health disparities. LEC

PRVM 846 Health Economics (3). This course is designed to explore the application of economic theories, principles, and concepts to the U.S. medical care system. Students will study the economic principles and demand and supply of health care and the place of medical care in the economic system; the role of social values in economic principles and societal decision making; the determinants of demand and supply of medical care services with particular attention to the relationship between supply and demand and need and demand; complements and substitutes as they apply to medical care services; the unique nature of the medical care product; the interconnectedness of markets; the principles of demand for health insurance and its role in the demand for medical care services; the role of government in the medical care system. LEC

PRVM 847 Medicine in Public Health (3). Medicine in Public Health is a 2-credit hour introductory graduate level course concerning the interface between clinical medicine and public health. M.P.H. students will undertake an interdisciplinary project designed to support traditional public health practices in the community, apply principles of evidence-based medicine, and use systematic approaches to promote the health of a population. M.P.H. students and medical students will undertake joint classes and participate in a service-learning project related to population health. LEC

PRVM 848 Long-Term Care Systems (3). The class analyzes long-term care in the U.S., addresses system and organizational aspects that affect organizational outcomes and quality of long-term care services, and considers long-term care policy and planning. The course will explicitly apply systems and organizational thinking, conceptualizing formal long-term care services as one series of responses to chronic illnesses and disability. LEC

PRVM 849 Qualitative Methods in Public Health (3). Qualitative research has diverged from its anthropological and sociological roots to become commonplace in marketing, business, clinical and public health settings. This course is focused to basic qualitative methodologies with applications in public health, health services research, health behavior, and quality improvement. This course reviews and gives real practice with strategic planning, choice of methods, logistics, and integration with quantitative methods. Students will receive hands-on experience with logistics and ac-

PRVM 850 Cancer Epidemiology (3). Epidemiology of major malignant disease is discussed. Emphasis is placed on the identification of populations at risk, etiologic factors and foreseeable methods of prevention. Relevant information on tumor biology, immunology, and viral, chemical and physical carcinogenesis is presented. Problems unique to epidemiological approach to cancer research are reviewed. Epidemiological methodology is stressed. Prerequisite: PRVM 800. LEC

PRVM 851 Public Health Policy and Law (3). This course is designed to prepare public health professionals to work in the world of laws, and to play an active and effective role in policy making and implementation. Students will understand the source of national, state, and local statutes and regulations and understand the role of common law. Students will understand the policy process at the national, state, and local level, and develop skills analyzing legislation and influencing policy decisions. Students will understand the rule making process at the national and state level. LEC

PRVM 852 Health Care for Special Populations (3). This course examines the characteristics and health-related needs of population groups with higher-than-average risk of disease, disability or premature death. Such groups include the frail elderly, racial and ethnic minorities, homeless people, refugees and persons living with AIDS, alcohol and substance abusers, teen mothers, low-birthweight infants, victims of family or other violence, the chronically or mentally ill, and persons with mental retardation and developmental disabilities. The course uses a social epidemiology approach to explore relationships between public policy and private behavior. LEC

PRVM 853 Responsible Conduct of Research (1). The purpose of this course is to equip research trainees in reading about, considering, and discussing the responsible conduct of research. The course uses the NAS (1992) as an option for meeting the NIH training requirements, which require that all NIH training grants provide training in the responsible conduct of research. This course provides a concise overview of key subject areas in the responsible conduct of research. It is designed to make students aware of relevant research policies and codes of scientific and ethical responsibilities. It provides the skills for identifying and resolving ethical conflicts that may arise in research. LEC

PRVM 854 Population and Community Mental Health (3). Social and social-psychological processes that shape the experience of mental health and illness and the consequences of disorder for individuals, families, and communities. Literature synthesis skills are used in a project focused on mental health service delivery. Prerequisite: Core courses in research design and statistical methodology. Students will demonstrate an understanding of the diversity of mental health service delivery, barriers to obtaining services such as educational needs among various types of health professionals, and access to care in different geographic areas or among different types of communities. LEC

PRVM 855 Seminar in Women's Health (3). Seminar in Women's Health is a 3 credit elective, graduate level course on gender-specific issues that are relevant in treatment approaches to various health issues, the differing health status of minority women, the evolution of women's health to include the entire life span and areas other than reproduction, the changing implications of health care and public health roles of women. Students will become familiar with the role of mental health in the protection or promotion of health. One critical review of selected readings in this area, students will consider the implications of mental health and illness as a community or public health issue. Students will be evaluated on critical thinking and evaluation skills through written assignments and projects designed to demonstrate their ability to identify and integrate key elements of mental health theory and research. RSC

PRVM 856 Community-Based Participatory Research (3). This is a graduate-level course designed to teach students the basic methods of conducting and evaluating community-based participatory research (CBPR). Students will be introduced to the fundamental concepts of CBPR, including the principles of participatory community assessment and diagnosis, defining the issue, documentation and evaluation of partnerships, and feedback, interpretation, and evaluation of partnerships. In addition, students will learn how to find funding mechanisms and journals that are appropriate for CBPR, as well as some of the key factors in writing about CBPR. Students will be introduced to a variety of examples of well-done CBPR and will learn what makes it different from other types of research done in community settings. Prerequisites: Social and Behavioral Aspects of Public Health or permission of instructor or LEC

PRVM 857 Motivational Interviewing in Public Health Settings (1). The course is designed to introduce participants to Motivational Interviewing, its concepts, and to the subsequent skills required for helping people to change. This course will be co-listed with DN 857. LEC

PRVM 858 Public Health In Film (2). The Public Health in Film course will allow students the opportunity to address multiple public health issues throughout time via educational films and public health documentaries and discussion. Specific issues will include, but will not be limited to: polio, leprosy, cholera, tuberculosis, the bubonic plague, influenza, bioterrorism and natural disasters. LEC

PRVM 859 Tobacco and Public Health (3). This course will provide an overview of tobacco as a public health problem and tobacco politics. Students will learn about the pharmacology of nicotine, the mechanisms leading to tobacco addiction and biological effects that explicitly apply to the tobacco cycle and comorbid illnesses such as depression and others. Public health approaches to preventing tobacco use initiation will be studied, including which initiatives are most effective. State-of-the-art methods to assist smokers to quit will be reviewed, including pharmacologic interventions, counseling by health professionals and education/motivation support. Barriers to obtaining services will be explored, such as educational needs among various types of health professionals, and access to care in different geographic areas or among different types of communities. LEC

PRVM 860 Community Nutrition (3). Comparative analysis of the demographic, geographic, and economic structure of various types of communities in Western
and non-Western societies. Relationships between these compositional elements of a given community, its food and nutrition resources and services, and the nutritional status of its members. Development of alternative strategies for resource expansion and/or for delivering appropriate nutritional services to target communities. Prerequisite: PRVM 862

PRVM 862 Terrorism, Emergency Preparedness, and Response (3). Through lectures, tabletop exercises, and invited speakers, the course content will include the following topics: terminology and core competencies, public health infrastructure, collaboration and communication, roles and responsibilities, psychological effects of terrorism, agricultural and zoonotic bioterrorism, law enforcements and public health, epidemiology of BT diseases (including agent specific lectures), burn injuries, jurisdiction communication, Strategic National Stockpile (SNS), National Incident Management System, and the health care response to terrorism, and public health laboratory response related to bioterrorism. LEC

PRVM 863 Health Disparities in Public Health (3). This course is designed to enhance students’ understanding of the biopsychosocial factors that contribute to disparities in health and health care. This course will also review strategies developed to reduce health disparities. Prerequisite: PRVM 818 Social and Behavioral Aspects of Public Health is recommended. LEC

PRVM 865 Advanced Topics in Medical Ethics (2-4). Advanced study of one or more of the major ethical issues confronting medicine on the current scene. In addition to research resulting in one or more papers, there are guided readings, seminars, and tutorials. Prerequisite: Permission of instructor. LEC

PRVM 866 Advanced Topics in the History of Medicine (2-4). Advanced study in the history of medicine on a period or topic of the student’s choice with approval of the instructor. Prerequisite: Permission of instructor. LEC

PRVM 868 Seminar in Outcomes Management and Research (1). Political, economic, and methodologic issues that affect health care quality and outcome measurements. LEC

PRVM 872 Grant Writing (3). This course combines instruction and practical exercises to move the participant step-by-step through all stages of planning programs, identifying funding sources, and writing grant proposals. Upon completion of the course, the student will have developed a quality proposal and be able to demonstrate skills in preparing grants. These include: Development of fundable idea, Researching appropriate opportunities, writing the grant, designing the budget, writing the letter of transmittal, planning the proposal, and managing the application process. LEC

PRVM 875 Management of Public Health Data (3). A 3 credit hour graduate level course concerning basic computing skills necessary for any advanced epidemiologic or administrative quantitative methods. This course covers basics of variable and dataset creation, building, maintenance and basic descriptive (not interpretive) analysis. The course is designed to be of use to students entering a variety of research, administrative, and public health settings in public health, clinical and other fields. Software covered will include SAS, SPSS, Epi Info, KIPHS, Microsoft Excel and ACCESS. The course can stand alone, or prepare students for Biostatistics and Epidemiology courses. Public data presentations will be stressed to prepare students to communicate about data with the lay public. LEC

PRVM 877 Health Communication (3). This course is focused on community health education and promotion, especially designing and evaluating health communication programs for populations with shared risks, exposures or behaviors. Ways in which the general public receives and assigns meaning to health messages will be reviewed. The strengths and weaknesses of specific health communication initiatives will be analyzed in terms of theoretical constructs, costs and outcomes. Students apply public health principles by designing a substantive health communication piece or educational material. Prerequisite: PRVM 800: Principles of Epidemiology and PRVM 818: Social and Behavioral Aspects of Public Health. Permission of instructor may be granted in lieu of these prerequisites. LEC

PRVM 878 Cost-Effectiveness and Decision Analysis (3). This course examines techniques that are used in making clinical and management decisions when outcomes are uncertain. The course begins with a review of probabilistic decision making, then explores methods of analyzing choices with uncertain outcomes, stressing the use of decision trees and sensitivity analysis. The course examines cost minimization analysis, cost effectiveness analysis, and cost benefit analysis. (Same as HP&M 872) LEC

PRVM 879 Statistical Computing in Research (2). This course will utilize statistical packages (SAS and SPSS) for data management and analysis. Collection and management of data along with one, two and multiple example parametric procedures will be covered for categorical and continuous data. Simple linear regression will also be covered. LEC

PRVM 881 Performance Improvement in Public Health (3). This course provides students with an overview of performance improvement and management integrated within the core public health functions: assessment, policy development and assurance. It uses both theoretical and practical material to develop basic competencies necessary for performance management in community and public health settings. Key topics will include assessment tools and models, continuous quality improvement, evidence-based practice, performance improvement methods (epidemiologic measurement, measures of central tendency, problem identification and analysis, control charts) and the development of team-based problem solving and resolution. Prerequisite: PRVM 800 Principles of Epidemiology, PRVM 875 Management of Public Data; PRVM 827 Public Health Administration is preferred. LEC

PRVM 882 Nonparametric Statistics (3). This course will study nonparametric methods in high risk situations as highlighted by the following topics: Students will learn how nonparametric methods provide exact p-values for tests, exact coverage probabilities for confidence intervals, exact experiment-wise error rates for multiple comparison procedures, and exact coverage probabilities for confidence bands. This course will be using EXCEL and SAS to conduct various procedures. Prerequisite: PRVM 814 and PRVM 817 or consent of instructor. LEC

PRVM 884 Categorical Data and Survival Analysis (3). An intermediate level statistics course that provides an understanding of the more advanced statistical methods to scientific research with emphasis on the application of statistical methodology to clinical research, public health practice, public health research and epidemiology. Prerequisite: PRVM 814, PRVM 817 and PRVM 879; or permission of the instructor. LEC

PRVM 886 Applied Linear Regression (3). Simple linear regression, multiple regression, logistic regression, non-linear regression, neural networks, autocorrelation, interactions, and residual diagnostics. Applications of the methods will focus on health related data. Prerequisite: 1) Fundamentals of Biostatistics I (PRVM 814) or the equivalent and 2) Fundamentals of Biostatistics II (PRVM 817) or Analysis of Variance (BMTR 801) or Permission of the Instructor. LEC

PRVM 887 Applied Multivariate Methods (3). This course is an advanced statistical course for students who have had fundamental biostatistics and linear regression. Topics to be covered include Hotelling’s T-squared test, MANOVA, principal components, factor analysis, discriminant analysis, canonical analysis, and cluster analysis. More advanced topics such as Dimensional Scaling or Structural Equation Modeling might be introduced if time allows. Computers will be extensively used through the whole course, and students are suggested to be familiar with some statistical software before taking this course. Although students are allowed to use the software they are comfortable with, SAS will be the primary statistical package used to demonstrate examples in this course. PREREQUISITES: PRVM 886 Applied Linear Regression or equivalents or permission of instructor. LEC

PRVM 890 Research in Community Health (3). Research in community health, leading to the Master of Public Health degree. Prerequisite: PRVM 800, PRVM 818, BMTR 811/PRVM 804, and departmental approval. LEC

PRVM 891 Community Health Practicum (5). Students will complete a practicum of at least 600 hours in a community health setting. (Same as NRSC 825.) Prerequisite: PRVM 880, PRVM 818, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 893 Community Health Project (1-3). Completion of a written project based on the community health practicum. The student will be examined orally over the methodology and content of the project. This course may be repeated for a maximum of six credit hours.) Prerequisite: PRVM 891 and permission of instructor. LEC

PRVM 899 Thesis (1-3). Preparation of a formal thesis based on the research conducted on a community health problem. After the thesis has been completed, the student will be given an oral examination on the research methods and content. Prerequisite: PRVM 890 and departmental approval. (This course may be repeated for a maximum of 6 credit hours.) THE
School of Music

Contents

Facilities ................................................................. 298
Graduate Studies in Music ..................................... 299

Admission ............................................................... 299
Diagnostic Examinations .................................... 299
Music Courses ....................................................... 299
Graduate Credit for Nonmajors in Performance .... 299
M.M. Areas in Performance ...................................... 299

Admission ............................................................... 300
M.M. Degree Requirements ..................................... 300
Brass ......................................................................... 301
Euphonium Courses ............................................... 301
Trombone Courses ................................................... 301
Trumpet Courses ..................................................... 301
Tuba Courses ............................................................ 301
Tuba-Euphonium Consort Course ............................ 301
Church Music .......................................................... 301

Chamber Music Courses ......................................... 301
Keyboard .................................................................. 301
Accompanying Courses ......................................... 301
Collage Courses ...................................................... 301
Harpischord Courses ............................................... 301
Organ Courses ........................................................ 301
Piano Courses .......................................................... 302
Strings ..................................................................... 302
Chamber Music Courses ......................................... 302
Double Bass Courses .............................................. 302
Harp Courses ............................................................ 302
Strings Courses ....................................................... 302
Viola Courses .......................................................... 303
Violin Courses .......................................................... 303
Violoncello Courses .................................................. 303
Wind & Percussion ................................................... 303
Bassoon Courses ...................................................... 303
Clarinet Courses ...................................................... 303
Flute Courses ............................................................ 303
French Horn Courses ............................................... 303
Oboe Courses .......................................................... 303
Percussion Courses ................................................... 304
Saxophone Courses .................................................. 304
Wind & Percussion Courses ..................................... 304
Voice ........................................................................ 304
Voice Courses .......................................................... 304

M.M. in Music Theory or Composition .................. 304
Admission ............................................................... 304
M.M. Degree Requirements ..................................... 305
Music Theory & Composition Courses .................... 305
M.M. in Musicology .................................................... 305
Admission ............................................................... 305
M.M. Degree Requirements ..................................... 305
Musicology Courses ............................................... 305
M.M. in Conducting ................................................... 306
Admission ............................................................... 306
M.M. Degree Requirements ..................................... 306
Band Courses .......................................................... 306
Choral Music Courses .............................................. 306
Conducting Courses ............................................... 307
M.M. Music Education & Music Therapy .............. 307
Admission ............................................................... 307
Ph.D. Degree Requirements .................................... 307

M.M.E. Music Education & Music Therapy .......... 307
Admission ............................................................... 307
M.M.E. with a Major in Music Education ............... 308
M.M.E. with a Major in Music Therapy ................. 308
Final Examination ................................................... 308
Nonthesis Option ..................................................... 308
Music Education & Music Therapy Courses ............ 308
Doctor of Musical Arts .......................................... 310
Admission ............................................................... 310
D.M.A. Degree Requirements ................................. 310
Composition Program ............................................. 311
Conducting Programs .............................................. 311
Doctor of Philosophy in Music .............................. 312
Admission ............................................................... 312
Ph.D. Degree Requirements .................................... 312
Doctor of Philosophy in Music Education .............. 313
Admission ............................................................... 313
Ph.D. Degree Requirements .................................... 313

See pages 12-13 for admission procedures.

Application fees: Domestic students in music: paper $55, online $45.
International students in music: paper $60, online $55.

Information about performances is available online at www.music.ku.edu
or www.lied.ku.edu.
The School of Music offers Master of Music programs in composition, conducting, musicology, music theory, and most areas of performance and Master of Music Education degree programs in music education and music therapy. The Doctor of Musical Arts degree is offered in composition, conducting, and areas of performance. Programs are offered leading to the Doctor of Philosophy degree in music education with subspecialties in music education and music therapy and to the Doctor of Philosophy degree in music with a subspecialty in musicology or music theory. The Kansas Board of Regents has designated KU as the sole institution in the Regents system authorized to grant doctoral degrees in music.

Contact the school for specific admission requirements. See also Admission in the General Information chapter of this catalog.

Facilities

Murphy Hall, named for former KU chancellor Franklin D. Murphy, houses the School of Music. It is a five-level facility with offices for faculty members in applied music, music theory and composition, musicology, opera, music education, music therapy, and ensembles. Designed for music and theatre, it contains four performance areas. Krafton-Preyer Theatre provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat proscenium stage facility.

The Kansas Center for Music Technology (KCMT) is a five-level facility with offices for faculty members in applied music, music theory and composition, musicology, opera, music education, music therapy, and ensembles. Designed for music and theatre, it contains four performance areas.

Krafton-Preyer Theatre provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat proscenium stage facility. William Inge Memorial Theatre is an intimate black-box facility with seating for up to 125, suitable for plays and small opera productions. Swarthout Recital Hall, a 340-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions. The Baustian Theatre, a black-box facility for opera and musical theatre productions, seats 125 and has a dressing room and wardrobe area, set construction and storage area, and office and performance control areas. Murphy Hall also houses classrooms, practice rooms, rehearsal halls, and storage facilities for instruments and sheet music. The Electronic Music Studio contains a digital workstation for the recording and production of electronic music and video.

The Kansas Center for Music Technology in Murphy Hall promotes the development and application of current technologies in music instruction, research, and creative projects. Its computer center contains 32 fully networked multimedia workstations. KCMT has a library of commercially available software for evaluation, experimentation, and integration into existing courses. The lab also contains three high-end workstations for professional-quality digital audio, digital video, and DVD authoring. The library includes basic productivity and Internet software; music notation and sequencing, ear-training, CD-ROMs, and drill design software; and digital editing software for audio, video, multimedia, and Web authoring. Through graduate and undergraduate workshops and music technology courses, KCMT helps faculty members and students develop innovative new software. It offers graduate teaching assistantships for applicants with experience in music technology.

The Thomas Gorton Music and Dance Library in Murphy Hall houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials and has the leading music collection in the Great Plains. It features digital workstations; study carrels; comfortable seating; and public display of new acquisitions, current periodicals, and special exhibitions. Students can make full use of music and dance information resources. The Joe and Joyce Hale Media System allows remote listening and viewing from 30 locations in the library, including 328 media carrels, the seminar room, and the group study room. Media carrels have remote controls, MIDI music keyboards, mini-disk recorders, computers, and video monitors.

The Music Education and Music Therapy Complex in Murphy Hall contains a model music education classroom; a general music instruction classroom, large and small therapy clinical spaces; two research spaces; faculty offices; the Psychology and Acoustics of Music Laboratory; and the Music Therapy Clinic, a clinical training and research facility. In addition, the complex houses a Vocology Laboratory, which affords excellent resources for research-based understanding of singing voice phenomena. The stationary lab facilitates acquisition and analysis of voice data in a controlled environment. It also provides mobile configurations of resources for field-based research and pedagogy in voice studios, choir rehearsal areas, classrooms, and music therapy clinics. A Polycom system enables interactive distance delivery of music education and music therapy graduate courses throughout Kansas and anywhere in the world.

The Lied Center of Kansas is a 2,000-seat performing arts center presenting diverse performances by world-class artists including Broadway musicals, contemporary dance and music, classical music, ballet, opera, multimedia collaborations and family events. Visiting artists provide education and activities for KU students and in the community, including school performances for local children and classroom visits. The venue houses concerts by the School of Music and Department of Dance, along with Student Union Activities shows and other university and community events. The performing arts center offers excellent acoustics and technical production capabilities. The stage features a 56-foot-wide proscenium opening, resilient wood floor, counterweighted rigging system, and ample wing space. Support areas include seven dressing rooms, dance rehearsal studio, Greenroom, and production office. The Lied Center is on KU’s west campus at Irving Hill Road and Constant Avenue.

The Dane and Polly Bailes Organ Recital Hall is acoustically designed for the teaching and performance of organ music. It has seating for 200 and is attached to the Lied Center main lobbies at two levels. It houses a 45-stop mechanical key-action (electric stop-action) organ built by Hellmuth Wolf et Associés, one of the finest builders of organs in the world. The hall is available to organ students for practice, lessons, and recitals. Its aesthetics are enhanced by three magnificent stained glass windows designed by Peter Thompson, former dean of the School of Fine Arts.

**Facilities**

**Murphy Hall**, 1530 Naismith Dr., Room 446 Lawrence, KS 66045-3103

**music@ku.edu or www.music.ku.edu**

(785) 864-3421, fax: (785) 864-5387

The School of Music offers Master of Music programs in composition, conducting, musicology, music theory, and most areas of performance and Master of Music Education degree programs in music education and music therapy. The Doctor of Musical Arts degree is offered in composition, conducting, and areas of performance. Programs are offered leading to the Doctor of Philosophy degree in music education with subspecialties in music education and music therapy and to the Doctor of Philosophy degree in music with a subspecialty in musicology or music theory. The Kansas Board of Regents has designated KU as the sole institution in the Regents system authorized to grant doctoral degrees in music.

Contact the school for specific admission requirements. See also Admission in the General Information chapter of this catalog.

**Facilities**

**Murphy Hall**, named for former KU chancellor Franklin D. Murphy, houses the School of Music. It is a five-level facility with offices for faculty members in applied music, music theory and composition, musicology, opera, music education, music therapy, and ensembles. Designed for music and theatre, it contains four performance areas. **Crafton-Preyer Theatre** provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat proscenium stage facility. **William Inge Memorial Theatre** is an intimate black-box facility with seating for up to 125, suitable for plays and small opera productions. **Swarthout Recital Hall**, a 340-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions. The **Baustian Theatre**, a black-box facility for opera and musical theatre productions, seats 125 and has a dressing room and wardrobe area, set construction and storage area, and office and performance control areas. Murphy Hall also houses classrooms, practice rooms, rehearsal halls, and storage facilities for instruments and sheet music. The **Electronic Music Studio** contains a digital workstation for the recording and production of electronic music and video.

The **Kansas Center for Music Technology** in Murphy Hall promotes the development and application of current technologies in music instruction, research, and creative projects. Its computer center contains 32 fully networked multimedia workstations. KCMT has a library of commercially available software for evaluation, experimentation, and integration into existing courses. The lab also contains three high-end workstations for professional-quality digital audio, digital video, and DVD authoring. The library includes basic productivity and Internet software; music notation and sequencing, ear-training, CD-ROMs, and drill design software; and digital editing software for audio, video, multimedia, and Web authoring. Through graduate and undergraduate workshops and music technology courses, KCMT helps faculty members and students develop innovative new software. It offers graduate teaching assistantships for applicants with experience in music technology.

**The Thomas Gorton Music and Dance Library** in Murphy Hall houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials and has the leading music collection in the Great Plains. It features digital workstations; study carrels; comfortable seating; and public display of new acquisitions, current periodicals, and special exhibitions. Students can make full use of music and dance information resources. The Joe and Joyce Hale Media System allows remote listening and viewing from 30 locations in the library, including 328 media carrels, the seminar room, and the group study room. Media carrels have remote controls, MIDI music keyboards, mini-disk recorders, computers, and video monitors.

**The Music Education and Music Therapy Complex** in Murphy Hall contains a model music education classroom; a general music instruction classroom, large and small therapy clinical spaces; two research spaces; faculty offices; the Psychology and Acoustics of Music Laboratory; and the Music Therapy Clinic, a clinical training and research facility. In addition, the complex houses a Vocology Laboratory, which affords excellent resources for research-based understanding of singing voice phenomena. The stationary lab facilitates acquisition and analysis of voice data in a controlled environment. It also provides mobile configurations of resources for field-based research and pedagogy in voice studios, choir rehearsal areas, classrooms, and music therapy clinics. A Polycom system enables interactive distance delivery of music education and music therapy graduate courses throughout Kansas and anywhere in the world.

**The Lied Center of Kansas** is a 2,000-seat performing arts center presenting diverse performances by world-class artists including Broadway musicals, contemporary dance and music, classical music, ballet, opera, multimedia collaborations and family events. Visiting artists provide education and activities for KU students and in the community, including school performances for local children and classroom visits. The venue houses concerts by the School of Music and Department of Dance, along with Student Union Activities shows and other university and community events. The performing arts center offers excellent acoustics and technical production capabilities. The stage features a 56-foot-wide proscenium opening, resilient wood floor, counterweighted rigging system, and ample wing space. Support areas include seven dressing rooms, dance rehearsal studio, Greenroom, and production office. The Lied Center is on KU’s west campus at Irving Hill Road and Constant Avenue.

**The Dane and Polly Bailes Organ Recital Hall** is acoustically designed for the teaching and performance of organ music. It has seating for 200 and is attached to the Lied Center main lobbies at two levels. It houses a 45-stop mechanical key-action (electric stop-action) organ built by Hellmuth Wolf et Associés, one of the finest builders of organs in the world. The hall is available to organ students for practice, lessons, and recitals. Its aesthetics are enhanced by three magnificent stained glass windows designed by Peter Thompson, former dean of the School of Fine Arts.

**Application procedures and program requirements constantly change. See [www.music.ku.edu](http://www.music.ku.edu) for current information.**
Graduate Studies in Music

Admission
Application procedures and program requirements constantly change. Please visit www.music.ku.edu for current information.
Submit your application and fee online at www.graduate.ku.edu.
Send one original transcript of all college and university coursework and other requested application materials to:

The University of Kansas
School of Music, Associate Dean
Murphy Hall, 1530 Naismith Dr., Room 460
Lawrence, KS 66045-3103

Programs of study leading to the Master of Music (M.M.), Master of Music Education (M.M.E.), Doctor of Musical Arts (D.M.A.), and Doctor of Philosophy (Ph.D.) are offered through the School of Music. Specific admission procedures and degree requirements for the M.M. and M.M.E. programs are described under division headings. Specific admission procedures and degree requirements for the D.M.A., Ph.D. (musicology/theory), and Ph.D. (music education) are listed in the appropriate sections.

Students applying for the fall semester who complete the following steps by December 15 receive priority consideration for fellowships and assistantships.

1. File a completed application form, a vita or résumé, one official transcript from each post-secondary institution attended, and three current letters of recommendation (within the last two years). International students also must provide official documentation of financial support. The amount varies each year; contact the office for current rates.
2. Applicants for the M.M.E. and Ph.D. programs must submit Graduate Record Examination scores.
3. Applicants in performance and conducting must include a repertoire list, copies of recent performances, and recent recordings.
4. Applicants in composition must include recent original compositions and recordings if available.
5. Applicants in musicology and music theory must submit at least two samples of scholarly writing.
6. Applicants in music education or music therapy can find required materials and procedures in the Music Education and Music Therapy section of this chapter or at www2.ku.edu/~memt.
7. Applicants in performance and conducting must perform an audition, typically scheduled early in the spring semester. At least a 3.0 grade-point average, overall and in the major area, is required for all course work counted toward any graduate degree in music. If the overall grade-point average falls below 3.0, the student is placed on probation for one semester; if the cumulative average is not 3.0 or higher after the next semester, the student is dismissed from the program. Students must also achieve at least a grade of B in thesis, lecture-recital, document or dissertation, and on each recital for satisfactory completion of degree requirements.

In consultation with the major adviser, each graduate music student selects a faculty advisory committee, subject to consent of the faculty members involved and approval of the associate dean. This usually occurs during the second semester of full-time enrollment. All M.M. committees must have three members. Ph.D. and D.M.A. committees must have five members including an outside faculty member representing Graduate Studies for the comprehensive and final oral examination. The M.M. committee must have only one member who represents the combined musicology and music theory faculties. D.M.A. committees must have one member from each faculty. This committee and major divisional faculty evaluate required recitals and administer the comprehensive and final oral examination. All degree candidates must pass the final oral examination at least four weeks before the date on which the degree is expected.

All doctoral students who have completed the required course work must be continuously enrolled until all requirements for the degree are completed. The primary faculty member directing the project determines the number of hours of enrollment. Each enrollment must reflect as accurately as possible the student’s demands on faculty time and university facilities. Normally, a student must be enrolled in a minimum of 3 hours the semester he or she completes the degree requirements.

Diagnostic Examinations. All entering graduate students (except music education, music therapy, and opera performance majors) must take written diagnostic examinations in musicology and music theory. These are given at the beginning of enrollment week to determine whether any need exists for remedial work, so that an appropriate academic program can be designed for each student. Students who show the need for remedial work must complete certain course work carrying undergraduate credit or must show mastery of the material by examination. Graduate students entering programs in piano must take additional tests in piano literature and functional piano skills.

Music Courses

MUS 586 The Business of Music (3).
MUS 686 Arts Administration: Presenting the Performing Arts (3).
MUS 732 Twentieth-Century Techniques Before 1945 (3). A study and analysis of music from the turn of the century to World War II. For non-music majors. Prerequisite: Permission of instructor. LEC
MUS 733 Twentieth-Century Techniques After 1945 (3). A study and analysis of music from World War II to the present. For non-music majors. Prerequisite: Permission of instructor. LEC

Graduate Credit for Nonmajors in Performance

Permission to enroll for graduate credit in applied music is determined by audition. This audition should be scheduled with the major division faculty at the beginning of each semester.

M.M. Areas in Performance

Brass and Percussion
Division Director: Scott Watson, scwatson@ku.edu
Murphy Hall, 1530 Naismith Dr., Room 120
Lawrence, KS 66045-3103, (785) 864-9738
Professors: Bushouse, Watson
Associate Professors: Leisring, Stevens
Assistant Professor: Davidson

Organ, Carillon, and Church Music
Division Director: James Higdon, jhiigdon@ku.edu,
Bales Recital Hall, (785) 864-2797
Professors: Bauer, Higdon
Associate Professor: Berghout (carillon)

Piano
Division Director: Richard Reber, rreber@ku.edu,
310 Murphy Hall, (785) 864-9643
Professors: Costa, Reber, Winerock
Professors Emeriti: Angeletti, Downs
Associate Professor: Ferrell
Assistant Professor: Spooner

Strings
Division Director: Edward Laut, elaut@ku.edu,
316 Murphy Hall, (785) 864-9659
Professor: Laut
Professor Emeritus: Boyajian
Associate Professor: Chun
Assistant Professor: Hughes

Graduate Studies in Music | Graduate Credit for Nonmajors in Performance | M.M. Areas in Performance

GRADUATE CATALOG

299
### Voice/Opera
Division Director: John Stephens, jastephe@ku.edu, 306 Murphy Hall, (785) 864-9617

Professors: Castle, Stephens  
Professor Emeritus: Crawford  
Associate Professors: Ferrell, Mendez  
Assistant Professors: Belcher, Broxholm

**Woodwinds**
Division Director: Margaret Marco, mmarco@ku.edu, 340 Murphy Hall, (785) 864-9719

Professors: Gnojek, Mallett  
Professors Emeriti: Boulton, Hawkins, Maxey  
Associate Professors: Fedele, Marco  
Assistant Professors: Stomberg, Zelnick

Master of Music degree programs are offered in accompanying, bassoon, carillon, cello, church music, clarinet, double bass, euphonium, flute, French horn, harp, oboe, opera performance, organ, percussion, piano, saxophone, trumpet, trombone, tuba, viola, violin, and voice.

### Admission
The applicant must perform an audition before the faculty of the major performance division. In some cases, an audio recording may be submitted in lieu of a live performance. A complete list of repertoire studied, including past recital programs, should be furnished to major division faculty members at the time of audition or submission of the tape recording.

Students in opera performance must take a minimum of one year each in French, German, and Italian before entering graduate studies or before completing the M.M. degree. For the master’s degree program in voice, the language requirement is one year of two of the following: French, German, or Italian. Both programs have prerequisites in French, German, and Italian diction. Students found deficient in a particular area of diction must enroll in the specific course in which they are deficient and pass it with a minimum grade of C or demonstrate proficiency by passing a diction diagnostic examination. A student whose transcript shows she or he has passed a particular language diction course normally is considered proficient in the diction of that language.

### M.M. Degree Requirements
A final solo recital is required for all master’s degrees in performance. Students majoring in piano also are expected to perform a chamber music recital or a full concerto. Students majoring in opera performance also must perform a significant role in at least one fully staged production. A recital preview is left to the discretion of the faculty members of each division. In divisions with no preview requirement, the option to have a preview is still available to students and faculty members. Divisions must approve recital content well in advance but no less than three weeks before the recital date. The candidate must file a professional-quality CD recording of the final recital with the School of Music before the final oral examination is scheduled.

#### A program of study in accompanying is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced accompanying</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology, music theory, and conducting</td>
<td>9-12</td>
</tr>
<tr>
<td>ACMP 822 The Accompanist’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>0-3</td>
</tr>
</tbody>
</table>

A student may emphasize vocal or instrumental accompanying. The vocal accompanying emphasis requires entering graduate students to take diction examinations in Italian, French, and German. Students found deficient in an area of diction must enroll in the specific course in which they are deficient and pass it with at least a grade of C.

### A program of study for students in bassoon, cello, clarinet, double bass, flute, harp, oboe, saxophone, viola, and violin is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>3-6</td>
</tr>
</tbody>
</table>

### A program of study in brass and percussion is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>W&amp;P 704 Special Studies in Brass Instrumental Pedagogy (1) (brass majors)</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

### A program of study in carillon is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARI 811 Carillon (advanced applied music)</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

All M.M. church music majors (choral conducting emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll in voice for two semesters. Students must enroll in a choral ensemble each semester of residence.

### A program of study in church music (choral conducting emphasis) is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced conducting and score reading</td>
<td>10</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

### A program of study in church music (organ emphasis) is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (organ)</td>
<td>8</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

### A program of study in opera performance is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (voice)</td>
<td>9</td>
</tr>
<tr>
<td>Vocal coaching</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced course in music theory</td>
<td>3</td>
</tr>
<tr>
<td>Opera workshop and opera production</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

### A program of study in organ is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (organ)</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
</tbody>
</table>

M.M. organ majors must be enrolled in ORGN 702 Master Class in Organ—Lab and ORGN 720 Studio Class in Organ—Lab each semester in residence.

### A program of study in piano performance, literature, and pedagogy is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (piano)</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>2-3</td>
</tr>
</tbody>
</table>

### A program of study in voice is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (voice)</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>2-4</td>
</tr>
</tbody>
</table>

### A program of study in woodwinds is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>2-3</td>
</tr>
</tbody>
</table>
Brass

- **Brass Courses**
  - BRSS 652 Brass Choir (0-1).
  - BRSS 921 Seminar in Performance and Pedagogy: ______ (3). Repertoire, performance practice, pedagogical, and stylistic concerns relating to the music for brass instruments throughout their history. Topics will include the physical development of the instruments, their usage as solo, chamber, and large ensemble instruments in both sacred and secular literature, and a survey of historical and modern bibliographic materials. May be repeated for credit when topics vary. IND

Euphonium Courses

- EUPH 622 Euphonium (1-4).
- EUPH 711 Euphonium (1-4). For graduate students not majoring in euphonium. May be repeated for credit. Summer session limit one to three hours. IND
- EUPH 811 Euphonium (1-6). For graduate students majoring in euphonium. May be repeated for credit. IND

Trombone Courses

- TROM 622 Trombone (1-4).
- TROM 652 Trombone Choir (0-1).
- TROM 711 Trombone (1-4). For graduate students not majoring in trombone. May be repeated for credit. Summer session limit one to three hours. IND
- TROM 811 Trombone (1-6). For graduate students majoring in trombone. May be repeated for credit. Summer session limit one to three hours. IND
- TROM 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in trombone. May be repeated for credit. Summer session limit one to three hours. RSH
- TROM 965 Doctoral Recitals (1-3). THE
- TROM 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
- TROM 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

Trumpet Courses

- TRUM 622 Trumpet (1-4).
- TRUM 652 Trumpet Ensemble (0-1).
- TRUM 711 Trumpet (1-4). For graduate students not majoring in trumpet. May be repeated for credit. Summer session limit one to three hours. IND
- TRUM 811 Trumpet (1-6). For graduate students majoring in trumpet. May be repeated for credit. Summer session limit one to three hours. IND
- TRUM 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in trumpet. May be repeated for credit. Summer session limit one to three hours. RSH
- TRUM 965 Doctoral Recitals (1-3). Maximum credit, seven hours. THE
- TRUM 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
- TRUM 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

Tuba Courses

- TUBA 622 Tuba (1-4).
- TUBA 711 Tuba (1-4). For graduate students not majoring in tuba. May be repeated for credit. Summer session limit one to three hours. IND
- TUBA 811 Tuba (1-6). For graduate students majoring in tuba. May be repeated for credit. Summer session limit one to three hours. IND
- TUBA 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in tuba. May be repeated for credit. Summer session limit one to three hours. RSH
- TUBA 965 Doctoral Recitals (1-3). THE
- TUBA 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

Tuba-Euphonium Consort Course

- TUEU 652 Tuba-Euphonium Consort (0-1).

Church Music

- **Church Music Courses**
  - CHUR 622 Bales Chorale (0-1).
  - CHUR 804 History of Liturgy (3). A survey of the history of liturgy encompassing all major western religious traditions, along with a brief overview of the development of ritual in non-western religions. Prerequisite: Permission of instructor. LEC
  - CHUR 805 Selected Topics in Church Music: ______ (1-3). Topics vary by semester. May be repeated for credit. LEC
  - CHUR 806 Service Playing I (2). A survey of organ playing and choral conducting techniques integral to the performance of religious services. Prerequisite: Permission of instructor. LEC
  - CHUR 807 Service Playing II (2). Continuing survey of organ playing and choral conducting techniques integral to the performance of religious services. Prerequisite: Permission of instructor. LEC
  - CHUR 821 Church Music Colloquium I: Anthem Literature (1). A survey of significant anthem literature. Prerequisite: Permission of instructor. LEC
  - CHUR 822 Church Music Colloquium II: Handbells (1). Handbell history, literature, performance, and rehearsal techniques. Prerequisite: Permission of instructor. LEC
  - CHUR 823 Church Music Colloquium III: Children's Choirs (1). A study of the history and literature of children's choirs, vocal characteristics of children, and rehearsal procedures with the children's choir. Prerequisite: Permission of instructor. LEC
  - CHUR 824 Church Music Colloquium IV: Hymnology (1). A study of the historical development of hymnody. Prerequisite: Permission of instructor. LEC
  - CHUR 921 Seminar in Church Music (3). Discussion of the history of sacred music, religion and the arts, and aesthetics. May be repeated for credit when topics vary. LEC
  - CHUR 962 Improvisation (2). Applied study in improvisation at the organ. Prerequisite: Permission of instructor. LEC

Keyboard

- **Accompanying Courses**
  - ACMP 527 Accompanying (1-4).
  - ACMP 529 Performance Class in Accompanying (1).
  - ACMP 727 Accompanying (1-4). Individual instruction in vocal and or instrumental accompanying. Prerequisite: Consent of instructor. IND
  - ACMP 811 Advanced Accompanying (1-6). For graduate students majoring in accompanying. May be repeated for credit. Summer session limit one to three hours. IND
  - ACMP 822 The Accompanist’s Literature (3). A course in which major vocal and instrumental works are studied with vocal or instrumental participants. LEC

Carillon Courses

- CARI 621 Carillon (1-4).
- CARI 711 Carillon (1-4). IND
- CARI 804 History of Carillon Literature and Design (3). A survey of carillon literature and design. Prerequisite: Permission of instructor. LEC
- CARI 811 Carillon (1-6). For graduate students majoring in carillon. May be repeated for credit. Prerequisite: Permission of instructor. IND
- CARI 820 Studio Class in Carillon (0). Studio performance of repertoire for students enrolled in carillon. Prerequisite: Permission of instructor. IND

Harpischord Courses

- HPCD 621 Harpsichord (1-4).
- HPCD 711 Harpsichord (1-4). Summer session limit one to two credits. IND

Organ Courses

- ORGN 502 Master Class in Organ—Lab (0).
- ORGN 524 Laboratory In Organ Construction (3).
- ORGN 603 Institute for Organ and Church Music (1-2).
- ORGN 608 Organ Pedagogy (2).
PIAN 921 Seminar in Performance and Pedagogy (3). A detailed study of repertoire, performance practice, pedagogical, and stylistic problems relating to keyboard music. May be repeated for credit when topics vary. LEC

PIAN 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in piano. May be repeated for credit. Summer session limit one to three hours. RSH

PIAN 965 Doctoral Recitals (1-3). Maximum credit, seven hours. THE

PIAN 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

PIAN 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

Strings

■ Chamber Music Courses

CHAM 615 University Camera (0-1).

CHAM 654 New Music Ensemble (0-2).

CHAM 820 Baroque Ensemble (0-2). Study and performance of seventeenth and eighteenth century chamber music, using replicas of period instruments. Primarily for woodwinds, strings, and keyboards. IND

CHAM 829 Advanced Chamber Music (0-2). A special study of chamber music works, with or without piano, with emphasis on problems of style and interpretation. May be repeated for credit. IND

CHAM 929 Advanced Chamber Music (0-2). IND

■ Double Bass Courses

DBBS 622 Double Bass (1-5).

DBBS 711 Double Bass (1-4). For graduate students not majoring in double bass. May be repeated for credit. Summer session limit one to three hours. IND

DBBS 720 Double Bass Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

DBBS 811 Double Bass (1-6). For graduate students majoring in double bass. May be repeated for credit. IND

■ Harp Courses

HARP 622 Harp (1-5).

HARP 711 Harp (1-4). For graduate students not majoring in harp. May be repeated for credit. Summer session limit one to three hours. IND

HARP 720 Harp Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

HARP 811 Harp (1-6). For graduate students majoring in harp. May be repeated for credit. Summer session limit one to three hours. IND

■ Strings Courses

STRG 701 String Pedagogy Workshop (0.5-3). A short-term intensive course in string pedagogy intended for school orchestra directors, private teachers, and advanced students. Normally offered during the summer session. May be repeated for credit. Graded on a satisfactory/unsatisfactory basis. IND

STRG 921 Seminar in Performance and Pedagogy (3). Repertoire, performance practice, and pedagogical and stylistic problems relating to instrument music before 1800. LEC

STRG 922 Seminar in Performance and Pedagogy (3). Stringed instrument repertoire from 1800 to 1875. LEC

STRG 923 Seminar in Performance and Pedagogy (3). Stringed instrument repertoire from 1875 to present. LEC

STRG 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

KU music faculty members have served as judges for international piano competitions, including the Tchaikovsky Competition in Moscow, the Chopin Competition in Warsaw, and the Van Cliburn Competition in Fort Worth.

The Thomas Gorton Music and Dance Library in Murphy Hall houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials, and has the leading music collection in the Great Plains.
Viola Courses

VIOA 622 Viola (1-5).

VIOA 711 Viola (1-4). For graduate students not majoring in viola. May be repeated for credit. Summer session limit one to three hours. IND

VIOA 720 Viola Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in viola (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

VIOA 811 Viola (1-6). For graduate students majoring in viola. May be repeated for credit. Summer session limit one to three hours. IND

VIOA 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in viola. May be repeated for credit. Summer session limit one to three hours. IND

VIOA 965 Doctoral Recitals (1-3). May be repeated for credit to a maximum of seven hours. THE

Violin Courses

VION 511 Workshop in Stringed Instrument Care and Repair (2).

VION 622 Violin (1-5).

VION 711 Violin (1-4). For graduate students not majoring in violin. May be repeated for credit. Summer session limit one to three hours. IND

VION 720 Violin Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

VION 731 Baroque Violin (1-4). IND

VION 811 Violin (1-6). For graduate students majoring in violin. May be repeated for credit. Summer session limit one to three hours. IND

VION 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in violin. May be repeated for credit. Summer session limit one to three hours. RSH

VION 965 Doctoral Recitals (1-3). Maximum of seven hours credit. THE

Violloncello Courses

VNCL 622 Violoncello (1-5).

VNCL 711 Violoncello (1-4). For graduate students not majoring in violoncello. May be repeated for credit. Summer session limit one to three hours. IND

VNCL 720 Cello Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violoncello (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

VNCL 811 Violoncello (1-6). For graduate students majoring in violoncello. May be repeated for credit. Summer session limit one to three hours. IND

VNCL 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in violoncello. May be repeated for credit. Summer session limit one to three hours. RSH

VNCL 965 Doctoral Recitals (1-3). May be repeated for credit to a maximum of seven hours. THE

Wind and Percussion

Bassoon Courses

BASN 622 Bassoon (1-4).

BASN 711 Bassoon (1-4). For graduate students not majoring in bassoon. May be repeated for credit. Summer session limit one to three hours. IND

BASN 811 Bassoon (1-6). For graduate students majoring in bassoon. May be repeated for credit. Summer session limit one to three hours. IND

BASN 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the bassoon during the seventeenth and eighteenth centuries. LEC

BASN 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC

BASN 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in bassoon. May be repeated for credit. Summer session limit one to three hours. RSH

BASN 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE

BASN 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

BASN 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSH

Clarinet Courses

CLAR 622 Clarinet (1-4).

CLAR 711 Clarinet (1-4). For graduate students not majoring in clarinet. May be repeated for credit. Summer session limit one to three hours. IND

CLAR 811 Clarinet (1-6). For graduate students majoring in clarinet. May be repeated for credit. Summer session limit one to three hours. IND

CLAR 921 Seminar (3). A study of clarinet repertoire and performance techniques in the 18th and 19th centuries. LEC

CLAR 922 Seminar (3). A study of clarinet repertoire and performance techniques from 1900 to the present. LEC

CLAR 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in clarinet. May be repeated for credit. Summer session limit one to three hours. RSH

CLAR 965 Doctoral Recitals (1-3). Maximum seven hours credit. RSH

CLAR 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

CLAR 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSH

Flute Courses

FLUT 622 Flute (1-4).

FLUT 711 Flute (1-4). For graduate students not majoring in flute. May be repeated for credit. Summer session limit one to three hours. IND

FLUT 731 Baroque Flute (1-4). IND

FLUT 811 Flute (1-6). For graduate students majoring in flute. May be repeated for credit. Summer session limit one to three credits. IND

FLUT 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the baroque flute and recorder during the seventeenth and eighteenth centuries. LEC

FLUT 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC

FLUT 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in flute. May be repeated for credit. Summer session limit one to three hours. RSH

FLUT 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE

FLUT 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

FLUT 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

French Horn Courses

FRHN 622 French Horn (1-4).

FRHN 652 Horn Ensemble (0-1).

FRHN 711 French Horn (1-4). For graduate students not majoring in French horn. May be repeated for credit. Summer session limit one to three hours. IND

FRHN 811 French Horn (1-6). For graduate students majoring in French horn. May be repeated for credit. Summer session limit one to three credits. IND

FRHN 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in French horn. May be repeated for credit. Summer session limit one to two hours. RSH

FRHN 965 Doctoral Recitals (1-3). THE

FRHN 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

FRHN 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

Oboe Courses

OBEO 622 Oboe (1-4).

OBEO 711 Oboe (1-4). For graduate students not majoring in oboe. May be repeated for credit. Summer session limit one to three hours. IND

OBEO 731 Baroque Oboe (1-4). IND

OBEO 811 Oboe (1-6). For graduate students majoring in oboe. May be repeated for credit. IND

OBEO 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the baroque oboe during the seventeenth and eighteenth centuries. LEC

OBEO 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC

OBEO 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in oboe. May be repeated for credit. Summer session limit one to three hours. RSH

OBEO 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE

OBEO 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

OBEO 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE
M.M. Areas in Performance | M.M. in Music Theory or Composition

■ Percussion Courses
PCUS 622 Percussion (1-4).
PCUS 711 Percussion (1-6). For graduate students not majoring in percussion. May be repeated for credit. Summer session limit one to three hours. IND
PCUS 811 Percussion (1-6). For graduate students majoring in percussion. May be repeated for credit. Summer session limit one to three credits. IND
PCUS 921 Seminar in Performance and Pedagogy (3). A survey of the interpretive problems encountered in percussion music from the various historical periods, and a study of the performance practices in orchestral, band, chamber ensemble, and solo literature. LEC
PCUS 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in percussion. May be repeated for credit. Summer session limit one to three hours. RSH
PCUS 965 Doctoral Recitals (1-3). THE
PCUS 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
PCUS 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

■ Saxophone Courses
SAXO 622 Saxophone (1-4).
SAXO 711 Saxophone (1-4). For graduate students not majoring in saxophone. May be repeated for credit. Summer session limit one to three hours. IND
SAXO 811 Saxophone (1-6). For graduate students majoring in saxophone. May be repeated for credit. Summer session limit one to three hours. IND
SAXO 921 Seminar in Performance (3). A study of repertoire and performance techniques from the saxophone’s inception to 1950. LEC
SAXO 922 Seminar in Performance (3). A study of repertoire and extended performance techniques from 1950 to the present. LEC
SAXO 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in saxophone. May be repeated for credit. Summer session limit one to three hours. RSH
SAXO 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE
SAXO 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
SAXO 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

■ Wind and Percussion Courses
W&P 630 Orchestral Repertoire (1).
W&P 655 Independent Study in: ______ (1-4).
W&P 702 Special Studies in Woodwind Instrument Pedagogy (1-3). Physiological factors of woodwind playing, teaching materials and techniques, practice methods, solo and chamber repertoire, mouthpieces, reeds and reeds, diversity of sound production, articulation, embouchure, and intonation. May be repeated for credit to a maximum of five hours. LEC
W&P 704 Special Studies in Brass Instrumental Pedagogy (1). Physiological factors of brass playing, teaching materials and techniques, practice methods, solo and chamber music repertoire, mouthpieces, discography, techniques of tone production, articulation, embouchure, and intonation. May be repeated for credit to a maximum of five hours. LEC
W&P 706 Advanced Pedagogy Workshops in Orchestral Instruments (0.5). Methods and materials of teaching fundamentals of the instruments. Lecture, class performance, class discussion, teaching demonstration, and library research. Summer session only. Prerequisite: Teaching experience or undergraduate instruction in the instrument, or permission of the instructor. LEC
W&P 708 Special Studies in Percussion Instrument Pedagogy (1-3). The study of percussion pedagogy of Membrane Percussion; Keyboard Percussion; and Jazz/Rock/Commercial Drum Set, Marching and World Percussion. Study will include basic and advanced techniques as teaching materials and techniques, repertoire, performance practice, and discography. Course may concentrate on one of the three areas listed above, or be taught as a survey course covering all three topics. May be repeated for credit up to a maximum of five hours. IND

■ Voice Courses
VOICE 500 Directed Study in: ______ (1-3).
VOICE 520 Vocal Coaching (1).
VOICE 622 Voice (1-4).
VOICE 670 Advanced Lyric Diction for Singers: ______ (1).
VOICE 704 Vocal Repertoire: ______ (2). A survey of selected topics in vocal repertoire to be chosen from categories such as: Italian, German, French, and English songs, oratorio literature, and art songs by women composers. The course may be repeated for credit when topic varies. LEC
VOICE 705 Advanced Vocal Literature I (3). An investigation of the development of French melodie. The course will include directed readings, writing, and performance. LEC
VOICE 706 Advanced Vocal Literature II (3). An investigation of the development of German lieder. The course will include directed readings, writing, and performance. LEC
VOICE 707 Advanced Vocal Literature III (3). An investigation of the development of songs in English. The course will include directed readings, writing, and performance. LEC
VOICE 711 Voice (1-4). For graduate students not majoring in voice. May be repeated for credit. Summer session limit one to three hours. IND
VOICE 720 Vocal Performance Class II (1). Solo vocal performance in a class situation with emphasis including the preparation, planning of repertoire, and interpretive skills appropriate to a recital. Advanced repertoire and appropriate level of vocal and musical comprehension shall be expected from the graduate student. Prerequisite: Consent of instructor. IND
VOICE 740 Vocal Performance (1). A class in the performance of vocal repertoire. IND
VOICE 770 Special Studies in Voice: English Lyric Diction for the Choral Singer and Soloist (1). A graduate level course designed for the choral director, public school music teacher and voice teacher. Techniques for achieving a distinct, unlabeled English pronunciation will be studied. The International Phonetic Alphabet will be employed. IND
VOICE 808 Vocal Pedagogy (1). A course offering performers and beginning teachers of classical singing a basic overview of vocal production. The class will explore the empirical and scientific principles of breathing, resonance, timbre, and other vocal features. Discussion of repertoire choices, vocal health, teaching styles, career development and other topics pertaining to the training of singers will be included. Additional emphasis will be placed on historical and contemporary pedagogues through original research. LEC
VOICE 811 Voice (1-6). For graduate students majoring in voice. May be repeated for credit. Summer session limit one to three hours. IND
VOICE 820 Vocal Coaching (1-4). In-depth investigation of elements of vocal performance such as: language, musical style, tradition, dramatic content and the communication thereof. Open to graduate voice majors with consent of instructor. IND
VOICE 890 Opera Workshop (0-4). The study of various aspects of opera, such as character development, aria, chorus, and opera scene study, staging, body movement, and audition techniques. May be repeated for credit. ACT
VOICE 892 Opera Production (2-4). The preparation and performance of an opera role. May be repeated for credit. ACT
VOICE 900 Directed Study in: ______ (1-3). Investigation of a special topic or project. Prerequisite: Consent of instructor. LEC
VOICE 921 Seminar in Performance: ______ (3). A detailed study of vocal repertoire, performance practice, and stylistic problems on a selected topic from areas such as oratorio, cantata, sonata cycles, vocal chamber music, song, or opera of specific composers (i.e., Verdi, Wagner, Mozart, Debussy, Poulenc, Wolf, Strauss), or twentieth century song. May be repeated for credit. LEC
VOICE 960 Vocal Pedagogy (2). A study of the problems encountered in the teaching of vocal technique, such as breathing, resonance, tone color, dynamic control, and dictation, and including sessions of supervised teaching. LEC
VOICE 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in voice. May be repeated for credit. Summer session limit one to three hours. RSH
VOICE 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE
VOICE 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
VOICE 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

M.M. in Music Theory or Composition
Division Director: James Barnes, jrbarnes@ku.edu
Murphy Hall, 1530 Naismith Dr., Room 222
Lawrence, KS 66045-3103, (785) 864-4514
Professor: Barnes
Professors Emeriti: Hoag, Mattila, Pozdro, Shumway
Associate Professors: Haaheim, Holmberg, McGee, Murphy
Assistant Professor: Pierce

Admission
Applicants are expected to have educational backgrounds equivalent to the B.A., the B.M. in music theory, or the B.M. in composition from KU. Applicants should submit copies of compositions and/or research papers in music theory as well as recordings, if available. Applicants are expected to have a reading knowledge of German, French, Italian, or Spanish. A language deficiency may be satisfied after entrance into the program. In addition to the required course work, students are encouraged to...
to continue study of performance and participate in ensembles on their major instruments.

**M.M. Degree Requirements**

Programs of study are as follows:

**Music Theory**
- Advanced music theory ................................................. 9
- Advanced musicology and/or advanced composition ................. 9
- MUSC 801 Music Bibliography and Research ......................... 3
- MTHC 778 History of Music Theory ..................................... 3
- Thesis ........................................................................... 6

**Composition**
- Advanced composition .................................................... 8
- Advanced musicology and music theory ................................. 12
- MUSC 801 Music Bibliography and Research ......................... 3
- Thesis ........................................................................... 6
- Recital ........................................................................... 1

**M.M. in Music Theory or Composition | M.M. in Musicology**

**Music Theory and Composition Courses**
- MTHC 541 Eighteenth-Century Counterpoint (3).
- MTHC 542 Sixteenth-Century Counterpoint (3).
- MTHC 559 Scoring for Concert Band (2).
- MTHC 583 Composition (2).
- MTHC 610 Form and Analysis (3).
- MTHC 655 Readings in Music Theory: ______ (1–4).
- MTHC 670 Scoring for Voice (3).
- MTHC 674 Orchestration I (3).
- MTHC 676 Orchestration II (3).
- MTHC 678 Electro-Acoustic Composition I (3).
- MTHC 680 Electro-Acoustic Composition II (3).
- MTHC 732 Introduction to the Analysis of Contemporary Music (3).
- MTHC 733 Advanced Analysis of Contemporary Music (3).
- MTHC 778 History of Music Theory (3).
- MUSC 752 Music of the Middle Ages (3).
- MUSC 753 History of Music Theory (3).
- MUSC 778 History of Music Theory (3).
- MUSC 794 Music of the Nineteenth and Twentieth Centuries (3).

**M.M. in Music Theory**

- MTHC 853 Advanced Composition (1–6).
- MUSC 850 Selected Topics in Music: ______ (0.5–3).
- MUSC 860 Advanced Electroacoustic Composition (3).
- MUSC 865 Advanced Conducting (3).
- MUSC 870 Advanced Conducting (3).
- MUSC 942 Seminar on Selected Topics in Musicology: ______ (3).
- MUSC 943 Seminar on Selected Topics in Musicology: ______ (3).
- MUSC 948 Seminar on Selected Topics in Musicology: ______ (3).
- MUSC 970 D.M.A. Lecture-Recital (1–6).
- MUSC 971 D.M.A. Lecture-Recital (1–6).
- MUSC 972 D.M.A. Document (1–6).
- MUSC 973 D.M.A. Lecture-Recital (1–6).
- MUSC 974 D.M.A. Lecture-Recital (1–6).
- MUSC 975 D.M.A. Lecture-Recital (1–6).
- MUSC 976 D.M.A. Lecture-Recital (1–6).
- MUSC 977 D.M.A. Lecture-Recital (1–6).
- MUSC 978 D.M.A. Lecture-Recital (1–6).
- MUSC 979 D.M.A. Lecture-Recital (1–6).
- MUSC 980 D.M.A. Lecture-Recital (1–6).
- MUSC 981 D.M.A. Lecture-Recital (1–6).
- MUSC 982 D.M.A. Lecture-Recital (1–6).
- MUSC 983 D.M.A. Lecture-Recital (1–6).
- MUSC 984 D.M.A. Lecture-Recital (1–6).
- MUSC 985 D.M.A. Lecture-Recital (1–6).
- MUSC 986 D.M.A. Lecture-Recital (1–6).
- MUSC 987 D.M.A. Lecture-Recital (1–6).
- MUSC 988 D.M.A. Lecture-Recital (1–6).
- MUSC 989 D.M.A. Lecture-Recital (1–6).
- MUSC 990 D.M.A. Lecture-Recital (1–6).
- MUSC 991 D.M.A. Lecture-Recital (1–6).
- MUSC 992 D.M.A. Lecture-Recital (1–6).
- MUSC 993 D.M.A. Lecture-Recital (1–6).
- MUSC 994 D.M.A. Lecture-Recital (1–6).
- MUSC 995 D.M.A. Lecture-Recital (1–6).
- MUSC 996 D.M.A. Lecture-Recital (1–6).
- MUSC 997 D.M.A. Lecture-Recital (1–6).
- MUSC 998 D.M.A. Lecture-Recital (1–6).
- MUSC 999 D.M.A. Lecture-Recital (1–6).

**M.M. in Musicology**

Division Director: Paul Laird, plaird@ku.edu
Murphy Hall, 1530 Naismith Dr., Room 334
Lawrence, KS 66045-3103, (785) 864-9716
Professors: Barnes, Laird
Professor Emeritus: Politoske
Associate Professor: Schwartz
Assistant Professors: Freeman, Wong

**Admission**

Applicants are expected to have educational backgrounds equivalent to the B.A. or B.M. in musicology from KU. Applicants are expected to have a reading knowledge of German, French, Italian, or Spanish. A language deficiency may be satisfied after entrance into the program. Proficiency in the piano is encouraged. Applicants must submit samples of original scholarly writing. In addition to the required course work, students are encouraged to continue study of performance or composition.

**M.M. Degree Requirements**

The course work for the M.M. degree is as follows:

- Musicology courses in the MUSC 650-MUSC 794 sequence ................................................. 9
- MUSC 654 or MUSC 656 Collegium Musicum ................................................................. 2
- Advanced music theory courses ................................................................................... 3
- MUSC 801 Music Bibliography and Research ........................................................... 3
- MUSC 940 Seminar on Selected Topics in Musicology: ______ (3).
- MUSC 941 Seminar on Selected Topics in Musicology: ______ (3).
- Electives in music performance .................................................................................... 4

**Musicology Courses**

- MUSC 560 Music in World Cultures (3). NW
- MUSC 650 Selected Topics in Music: ______ (0.5–3).
- MUSC 654 Collegium Musicum, Vocal (0–1).
- MUSC 655 Readings in Music Theory: ______ (1–4).
- MUSC 656 Collegium Musicum, Instrumental (0–1).
- MUSC 744 Readings in Jazz and American Popular Music (1–3). Investigation of a subject by means of directed study of primary resources. Prerequisite: Permission of instructor. IND
- MUSC 752 Music of the Middle Ages (3). Prerequisite: MUSC 320. LEC
- MUSC 753 Music of the Renaissance (3). Prerequisite: MUSC 340. LEC
- MUSC 754 Music of the Baroque Era (3). Prerequisite: MUSC 340 and MUSC 440. LEC
- MUSC 755 Music of the Classical Era (3). Prerequisite: MUSC 440. LEC

Swarthout Recital Hall, a 340-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions.

The Kansas Center for Music Technology in Murphy Hall promotes the development and application of current technologies in music instruction, research, and creative projects.
The College of Music is ranked 12th in the nation in the 2009 edition of U.S. News & World Report's "America's Best Graduate Schools."
CHOR 642 Chamber Choir (0-1).

CHOR 654 Collegium Musicum, Vocal (0-1).

CHOR 701 Workshop in: (0.5-3). May be repeated for credit. LEC

CHOR 805 Interpretation of Choral Music (1). A study of the essential factors necessary for the understanding and subsequent interpretation of various compositions of advanced choral music. Offered in the summer session only. LEC

CHOR 820 Orchestral Bowing Techniques for Choral Conductors (1). Stylistic, expressive, and technical considerations essential for making effective bowing decisions. Prerequisite: A course in conducting. LAB

CHOR 825 Choral Diction (3). Study of methods to teach and learn diction in choral music contexts. Attention to International Phonetic Alphabet, acoustic implications of particular phonemes, and contributions of emerging technologies. Application of various languages, including English, Latin, Italian, French, German, and Spanish. (Same as MSEM 825) LEC

CHOR 826 Adolescent Changing Voices (3). Scientific approaches to the pedagogy of adolescent male and female voices during voice change. (Same as MSEM 826) LEC

CHOR 827 Children's Voices (3). Scientific approaches to understanding and working with unchanged children's voices. (Same as MSEM 827) LEC

CHOR 828 Science-Based Voice Education (3-6). Comprehensive examination of vocal anatomy, respiration, phonation, resonance, articulation, and voice development, with particular attention to research-based vocal/choral pedagogies for working with children and adult voices. (Same as MSEM 828) Prerequisite: Permission of instructor. LEC

CHOR 830 Sacred Choral Repertoire (2). A study of anthems for Lectionary years A, B, and C. For church choir directors and church music majors. May be repeated for credit. Prerequisite: Consent of instructor. LAB

CHOR 850 Choral Arranging (2). Techniques of arranging for large and small choral groups, with and without accompaniment. Prerequisite: MTHC 253 or consent of instructor. LEC

CHOR 910 Research Methodologies in Choral Music (3). This course will provide the student with an overview of historical, analytical, qualitative, and quantitative approaches used in the research of choral music and issues related to teaching and conducting in the choral field. LEC

Conducting Courses

COND 711 Choral Conducting I (2). Fall semester. A study of conducting techniques as they pertain to stylistic interpretation of choral music from the Renaissance, Baroque, and Classical periods. The building of a choral repertoire. Prerequisite: Consent of instructor. LAB

COND 712 Choral Conducting II (2). Spring semester. A continuation of COND 711. Interpretative analysis of stylistic characteristics of the Romantic and contemporary periods. Prerequisite: MSEM 246, MSEM 331, and/or consent of instructor. RSH

COND 741 Instrumental Conducting (2). A study of conducting techniques as they pertain to the development of an expressive and precise choral ensemble. Participation in rehearsals under the supervision of instructor. May involve conducting in public performance. May be repeated for credit. Summer session limit one to three hours. Prerequisite: Four hours of conducting and/or consent of instructor. IND

COND 820 Advanced Choral Conducting and Rehearsal Techniques (3). Refinement of conducting and teaching skills in a choral setting. Focus on relationships between gesture and choral sound, rehearsal structure and optimal learning, and age-appropriate choral literature and development of musicality. (Same as MSEM 820) LAB

COND 821 Advanced Score Reading (2). Development of fluency in reading full scores at the piano. May be repeated for credit. Prerequisite: Two semesters of COND 791 or consent of instructor. RSH

COND 822 Choral Literature—Late Baroque Era to Classical Era (3). LEC

COND 823 Choral Literature—Romantic Era (3). LEC

COND 824 Choral Literature—Contemporary Era (3). LEC

COND 845 Advanced Instrumental Conducting (3). A study of techniques needed to project the conductor’s concept in rehearsal and performance. Participation in rehearsals under the supervision of the instructor. May involve conducting in public performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH

COND 921 Seminar (3). Choral literature from 1450 to 1650. LEC

COND 931 Seminar (3). Symphonic repertoire. LEC

COND 932 Seminar (3). Operatic repertoire. LEC

COND 933 Seminar (3). Solo repertoire with orchestra. LEC

COND 941 Seminar: Band Literature: _____ (3). A study of literature for wind band including original works and transcriptions. May be repeated for credit when topic varies. LEC

COND 961 Directed Performance (1-6). Open only to students who have been admitted to the D.M.A. program in conducting. May be repeated for credit. Summer session limit one to three hours. RSH

COND 965 Doctoral Recitals (1-2). Maximum credit, four hours. THE

COND 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSH

COND 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

Music courses

Jazz Courses

JAZZ 608 Jazz Ensemble (0-1).

JAZZ 612 Vocal Jazz Ensemble (0-1).

JAZZ 624 Jazz Improvisation I (2).

JAZZ 625 Jazz Improvisation II (2).

JAZZ 630 Introduction to Jazz Piano (2).

JAZZ 689 Jazz Arranging (2).

Orchestra Courses

ORCH 600 University Symphony Orchestra (0-1).

ORCH 601 University Chamber Orchestra (1).

ORCH 701 Workshop in: _____ (0.5-3). May be repeated for credit. LEC

Percussion Ensemble Course

PENS 652 Percussion Ensemble (0-1).

Wind Ensemble Course

WENS 652 Wind Ensemble (0-6).

M.M. in Music Education and Music Therapy

Division Director: Martin Bergee, mbergee@ku.edu

Murphy Hall, 1530 Naismith Dr., Room 448

Lawrence, KS 66045-3103, www2.ku.edu/~memt/, (785) 864-9746

Graduate Director: James F. Daugherty, jdaughery@ku.edu, (785) 864-9637

Professors: Bergee, Clair, Duerksen, S. Hedden, Johnson

Professor Emeritus: Radocy

Associate Professors: Colwell, Daugherty, D. Hedden, Register

The division's graduate program includes advanced professional and scholarly study for music educators and music therapists, licensure/certification programs for those with baccalaureate degrees in other fields who plan to enter the music education and music therapy professions (these initial licensure/certification programs typically also require collateral undergraduate study), and advanced study for individuals in related disciplines. Areas of emphasis, curricula, examinations, and regulations and procedures are described in a pamphlet, Graduate Handbook in Music Education and Music Therapy, available at the division office and online at the division Web site above.

Admission

Admission requirements are as follows:

1. Undergraduate grade-point average of 3.0 or higher on a 4.0 scale.

2. An appropriate baccalaureate degree to support the individual’s goals for master’s study. Students seeking entrance into the graduate initial certification programs in music education or music therapy should have substantial backgrounds in music regardless of undergraduate major.

3. Scores on the Graduate Record Examination (verbal, quantitative, analytical writing).

4. Three letters of recommendation.

5. Submission of a DVD recording appropriate to the degree emphasis.

6. Other supporting materials are required.

For detailed information about admission see the Graduate Application Procedure document at www2.ku.edu/~memt/prospective-students/graduate/admissions.shtml.
Master's Degree Programs

Course and Proficiency Requirements: M.M.E. with a Major in Music Education. The degree requires a minimum of 30 hours of graduate credit. At least one-half of the required credit hours must be in courses open only to graduate students. At least 20 of the hours must be in regularly scheduled classes excluding directed study, research, and thesis.

Course distribution:
- At least one-third of the total requirement in the major.
- At least one-third of the total requirement in other studies in music.
- At least 17 hours in MEMT including MEMT 812 Research in Music Education and Music Therapy (3 hours), MEMT 899 Master's Thesis (3-5 hours), and additional hours to reach the minimum elected from MEMT 700- and 800-level courses, subject to the adviser's approval. At least two courses must be at the 800 level.
- At least 10 graduate hours outside of MEMT, including at least 2 hours of applied music or conducting; at least 3 hours in musicology, theory, or composition; at least 3 hours in a nonmusic supporting area; and additional non-MEMT hours necessary to reach the minimum. All of these selections are subject to the adviser's approval.

Course and Proficiency Requirements: M.M.E. with a Major in Music Therapy. At least half the minimum 30 graduate hours must be in courses open only to graduate students.

Course distribution:
- At least one-third of the total requirement in the major, including MEMT 864 or its equivalent.
- At least one-third of the total requirement in other studies in music related to the objectives of the degree. This work must include the applied music proficiency specified below.
- The remainder of the requirement in supportive work in behavioral sciences/special education. This must include 6 hours of statistics and/or research course work chosen in consultation with the adviser.

The program must include at least 17 hours of graduate work in the division, including MEMT 812 and the master's thesis. At least 9 of these hours must be in regularly scheduled courses.

At least 10 hours of graduate work must be earned outside MEMT.

Proficiency as a performing musician must be demonstrated before the degree may be awarded. This proficiency normally is demonstrated through the videotaped audition described online in the MEMT Graduate Application Procedure document.

The M.M.E. with a major in music therapy may be earned only by individuals eligible to sit for the national examination offered by the Certification Board for Music Therapists (CBMT).

Final Examination. The final oral examination is administered by the student's adviser and at least two other members of the Graduate Faculty. The examination must pertain to the student's thesis but is not confined to that topic.

Nonthesis Option. Students may elect to earn the M.M.E. with a major in music education or the M.M.E. with a major in music therapy using the nonthesis option, which functions as a terminal degree. The nonthesis option requires a total of 37 hours of credit. This option culminates with a 3-credit-hour project (MEMT 895 Master's Project), and a 1-credit-hour comprehensive final examination (MEMT 898 Comprehensive Examination).

Music Education and Music Therapy Courses

MEMT 500 Student Teaching: _____ (1-6).
MEMT 596 Clinical Internship: (1-15).
MEMT 597 Individual Study: _____ (1-15).
MEMT 598 Special Course: _____ (1-5).
MEMT 616 Advanced Pedagogy and Materials: _____ (1).
MEMT 651 Sociocultural Influences on Musical Behavior: (3).
MEMT 670 Acoustics of Music: (3).
MEMT 707 Mainstreaming/Inclusion in Music Education: (2).
MEMT 770 Measurement in Music Education Professional Practice: (3).
MEMT 780 Internship in Teaching Music: (1-15).
MEMT 791 Music Education/Music Therapy Techniques: _____ (1-3).
MEMT 798 Special Course: _____ (1-5).

For courses in dance, see the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.
contemporary societies. The relations between school and community music. The role of musical organizations, institutions, and agencies in American life. LEC

MEMT 815 Musical Values and Aesthetics (3). Examination of musical values in the context of music’s functions and uses. Diverse viewpoints are considered, with attention to philosophical and psychological aesthetics. Implications and applications of values of music education and other fields. LEC

MEMT 816 Current Trends in Music Education (3). A comprehensive study of the elements that contribute to current practice and successful music programs (many of all of these may be anticipated dependent upon the class participants’ needs): curriculum and standards, classroom management, pedagogy, leadership, organizational structure, budget and finance, scheduling, federal mandates, and administrative practices. LEC

MEMT 817 Methodologies in Music Education (3). A survey of music methodology (general, vocal, instrumental) used by teachers at the pre-school, elementary, middle/junior high, and high school levels. LEC

MEMT 818 Behavior Management in Music (3). A study of behavioral theories and techniques as applied to classroom and clinical settings for music professionals. Emphasis on a conceptual framework for human behavior and the amelioration of behavior problems. LEC

MEMT 819 Music in Early Childhood (2). Child development as related to musical development, including implications for participation in music from birth through age seven. Current trends in goals, objectives, materials, equipment, facilities, training methods and innovative methods for establishing reliability and validity. Each student will develop and evaluate a measure of some type of musical behavior appropriate for an educational or therapeutic setting. LEC

MEMT 820 Advanced Choral Conducting and Rehearsal Techniques (3). Refinement of conducting and teaching skills in a choral setting. Focus on relationships between gesture and choral sound, rehearsal structure and optimal learning, and age-appropriate choral literature and development of musicianship. (Same as CND 820) LEC

MEMT 823 Seminar in: ________ (1-3). LEC

MEMT 825 Choral Diction (3). Study of methods to teach and learn diction in choral music contexts. Attention to International Phonetic Alphabet, acoustic implications of particular phonemes, and contributions of emerging technologies. Applications to various choral settings, including English, Latin, Italian, French, German, and Spanish. (Same as CHOR 825) LEC

MEMT 826 Adolescent Changing Voices (3). Scientific approaches to the pedagogy of adolescent male and female voices during voice change. (Same as CHOR 826) LEC

MEMT 827 Children’s Voices (3). Scientific approaches to understanding and working with untrained children’s voices. (Same as CHOR 827) LEC

MEMT 828 Science-Based Voice Education (3-6). Comprehensive examination of vocal anatomy, respiration, phonation, resonance, articulation, and voice development, with particular attention to research-based vocal/choral pedagogies for working with children and/or adolescent voices. (Same as CHOR 828) Prerequisite: Permission of instructor. LEC

MEMT 830 Leadership and Program Development in Music Education (2-3). A comprehensive study of the elements of management, leadership, organizational structure, budget and finance, federal mandates, and administrative practices. LEC

MEMT 835 Practical Applications of Advanced Methodology in the Music Classroom (2-3). A comprehensive study and application of the elements that contribute to current practice in methodology and pedagogy in the music classroom, encompassing elementary general, choral, orchestral, and band music. LEC

MEMT 838 Orff Applications in Music Education and Music Therapy (2). The use of the Orff-Schulwerk approach in music education and music therapy. Course includes historical background, philosophical approach and practical application of the process. Prerequisite: Admission to professional sequence or permission from MEMT division. LEC

MEMT 840 Development of Supervision Skills (2-3). Development of individual and group improvisation skills and their applications in professional practice. LEC

MEMT 845 Curriculum Development in Music Education (3). Developing a practical and useful music curriculum that aligns theoretical/philosophical position, program goals, course objectives, instructional materials, learning activities, and assessments. LEC

MEMT 850 Measurement of Musical Behavior (3). Measurement theory applied to the development and administration of measures of musical ability, achievement, attitude, and performance for the use in individual and program evaluation, classroom management, personnel, finance, curriculum, supervision, and articulation of the music program. Students will work in consultation with qualified Music Therapy staff. FLD

MEMT 852 Orff Schulwerk Supervision (2). An advanced course in preparing supervisory personnel. Significant emphasis on practical supervision with an emphasis on qualitative analysis of performance on the examination. Prerequisite: Permission of the instructor. IND

MEMT 855 Music Therapy in Care and Bereavement of Adult Persons (3). The theories and practice of music therapy as an enhancement of health and wellness and to medical interventions for adults will include applications within the medical setting and in the home setting for the promotion of wellness, approaches for stress management, medical procedural support, pre-operative and post-operative support, follow-up care in catastrophic illness, interventions in post-traumatic stress disorder, and others. Prerequisite: Admission to the graduate program in music therapy or permission of the instructor. FLD

MEMT 860 Assessment in Music Therapy Professional Practice (2). Skills and knowledge needed to assess and evaluate clients, goals, treatments and their effectiveness, program outcomes, program quality, and quality of care. LEC

MEMT 861 Current Trends in Music Therapy (2). A comprehensive study of the elements that contribute to current practice in music therapy, which incorporates music therapy program design, implementation, and evaluation. The student will work in consultation with qualified Music Therapy staff. FLD

MEMT 862 Advanced Clinical Techniques (3). The student will articulate, test and refine music therapy clinical techniques (with clients) with an emphasis on evidence of practice. Students will work in consultation with qualified Music Therapy staff. FLD

MEMT 863 The Influence of Music on Behavior II (2). A laboratory and research course to accompany or follow MEMT 763. LAB

MEMT 864 Philosophy and Theory of Music Therapy (3). Concentrated, interdisciplinary study of conceptual foundations for music therapy. LEC

MEMT 889 Practicum in Music Therapy (1-16). Advanced music therapy practice experience in clinical work with specific populations. Students will be committed to professional competencies, code of ethics, assessment and implementation of interventions, leadership, organizational structure, budget and finance, scheduling and management of contracts, grant writing, and other administrative practices. FLD

MEMT 895 Master’s Project (1-3). RSH

MEMT 897 Independent Study: ________ (1-4). Prerequisite: Consent of adviser and instructor. RSH

MEMT 898 Comprehensive Examination (1). An independent course in preparation for the M.M.E. or M.F.A. degree final examination. The grade will be S or U as determined by performance on the examination. Prerequisite: Permission of the instructor. IND

MEMT 899 Master’s Thesis (1-16). THE

MEMT 910 Learning Theories and Music Education (3). (V) A broad survey of formal learning theories and other approaches to the teaching-learning situation, accenting implications for, applications to, and research needs in music education. LEC

MEMT 912 Administration of Music Education Programs (3). A study of the administration of music education programs at all school levels; topics will include personnel, finance, curriculum, supervision, and articulation of the music program with other segments of the school. LEC

MEMT 915 Teaching Music in Higher Education (3). Knowledge, skills, and dispositions for graduate students in music who are preparing to teach at the college level. This course is directed toward the end of developing competencies and understanding that will contribute to one’s becoming an effective college/university teacher. LEC

MEMT 923 Seminar in: ________ (1-3). Graded on a satisfactory/unsatisfactory basis. LEC

MEMT 933 Advanced Acoustical and Psychological Aspects of Musical Behavior (3). Study and experimental investigations of acoustical, psychoacoustical, and psychological phenomena as they influence music attention. Will be given to physical parameters; estimation of pitch, loudness, and timbre; magnitude estimation; theories of consonance, experimental aesthetics; and measurement and prediction of musical preference. Each week will be expected to complete a lab experiment or quasi-experiment related to human musical behavior. (Same as PSYC 853). Prerequisite: MEMT 433 or equivalent, or permission of instructor. LEC

MEMT 956 Advanced Methods in Experimental and Descriptive Research in Music (3). An advanced study of experimental and descriptive research techniques with careful investigation of research design, experimental control, analysis and manuscript composition. Consideration of recent trends in research methods and their place in the scholarly scheme will be reviewed. Prerequisite: MEMT 812 or permission of instructor. LEC

MEMT 972 Research in Music Education (2-5). For students who are sufficiently qualified to conduct original investigations in this field. Consent of instructor necessary. IND

MEMT 980 Advanced Topics: ________ (1-3). A special course of study to meet current needs of education professionals — primarily for post-master’s level students. IND

MEMT 995 Field Experience: ________ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the student’s personal and professional performance and meet with the student and evaluations of the field experiences will be prepared independently by the student, a representative of the cooperating agency, and the adviser. Open only to ad-
Doctor of Musical Arts

Admission

The degree of Doctor of Musical Arts is intended as a recognition of high professional attainment. Since only exceptionally well-qualified candidates are admitted to the program, doctoral studies are devoted primarily to developing professional qualifications for teaching at the college level. The degree of Doctor of Musical Arts is offered in church music (organ or choral conducting emphasis), composition, conducting (band, choral, or orchestral), and areas of performance.

The applicant is expected to have a master’s degree, or its demonstrated equivalent, in the proposed field. In addition to official transcripts and letters of recommendation, all applicants should submit résumés of their training and experience in teaching and performing. For general information on academic requirements, residence, tenure, and enrollment, see the General Information chapter of this catalog. Further admission requirements are listed below.

Composition. Applicants should submit scores of original works (including master’s thesis), recordings, and lists of past performances.

Conducting. Applicants are expected to have had experience in conducting that spans a period of not less than two years. This may include work in public school, college, or with other amateur or professional ensembles. Applicants normally are expected to have a high level of performing ability on an instrument or in voice. Applicants are expected to submit preliminary audition materials that include a video recording of the applicant conducting in performance and in rehearsal, an audio recording of an ensemble trained and conducted by the applicant, and a prescribed formal analysis project. Details can be found at the band, choral, and orchestral links at www.music.ku.edu. An entrance interview-audition is required for admission. The audition is heard by a committee composed of the Graduate Faculty of the conducting divisions. Approval by a majority of the committee is required for acceptance into the program. The audition may include (1) harmonic and melodic dictation and/or sight-singing; (2) score identification; (3) score reading at the keyboard; and (4) conducting from a band, choral, or orchestral score to be selected by the examiners. International students may submit a DVD. The Graduate Faculty in the ensemble divisions review this recording.

Students applying to the D.M.A. program in choral conducting must display a working knowledge of two of the following four languages: French, German, Spanish, and Italian. A working knowledge normally implies at least two semesters of undergraduate study.

Performance. The applicant must be prepared to perform the equivalent of a full master’s recital as deemed appropriate by the major performance division. The audition is heard by a committee of the Graduate Faculty of the major division. A member of the committee on graduate studies in music also may be invited to attend as a voting member of the committee. Approval by a majority of the committee is required for acceptance into the program. The applicant should consult the major performance division for specific memory and repertoire requirements. The applicant also should submit a comprehensive repertoire list indicating work studied, memorized, performed in public, or ready for immediate performance. In the case of international students, acceptance may be achieved by submitting an audiotape to be reviewed by the Graduate Faculty in the major division.

Students applying to the D.M.A. program in voice must have taken a minimum of one year each of French, German, and Italian, and courses in French, German, Italian, and English diction before entering the graduate program or before taking the comprehensive oral examination. Entering students who are deficient in a language or a particular area of diction must enroll in the specific course in which they are deficient and pass it with a grade of C or demonstrate proficiency by passing an examination.

D.M.A. Degree Requirements

Research Skills. Before being admitted to the comprehensive examinations, all D.M.A. students must present satisfactory evidence of research skills relevant to completion of the document or lecture-recital. These skills must include one of the following with the approval of the adviser, division, and associate dean:

1. Reading proficiency in a foreign language(s).
2. Proficiency in computer techniques by completing one of two tracks:
   - **Track A**
     - Complete MENT 116 Performance Media: Electronics/Synthesizers/Computer or equivalent.
     - Complete at least one graduate seminar in computer applications in music.
     - Design and implement a substantial project relevant to the candidate’s professional development. This project may be developed using a traditional or music-oriented authorizing system.
   - **Track B**
     - Complete EECS 268 or equivalent.
     - Design and implement a substantial programming project relevant to the candidate’s professional development. This project should be written using a traditional, structured or object-oriented programming language.
   - 3. Proficiency in techniques for measurement of quantitative research.

Advisory Committee. Each graduate student selects a faculty advisory committee, in consultation with the major adviser, subject to the consent of the faculty members involved, and approved by the associate dean. This usually occurs during the second semester of full-time enrollment. All committees must have at least four members, two from the major area, one from musicology, and one from music theory from the Graduate Faculty in the School of Music. This committee participates with the major music division faculty in evaluating required recitals and administers the comprehensive and final oral examinations. One additional committee member from outside the major department must be selected to participate in the oral comprehensive and final examination. All candidates for graduate degrees must pass the final oral examination at least four weeks before the date on which they expect to receive the degree.

Recitals. All students in performance and in choral, orchestral, and instrumental conducting must perform a total of three recitals. This number does not include the D.M.A. lecture-recital if the student selects a lecture-recital as a final project. Each recital program should be approved by the faculty in the major area before the recital is performed. One or two recitals may be presented before taking the comprehensive oral examination.

Doctoral conducting students are expected to perform three recitals, each consisting of 50 to 60 minutes of programmed music. Up to two recitals may consist of the combination of works conducted with various official university ensembles over the course of several semesters. The third recital must be a single program with a major ensemble assigned as part of course work or teaching duties and presented as a regular program in that ensemble’s performance schedule. The third recital should be a substantial working program.
may include a complete performance of an opera, ballet/dance, or musical. A student who wishes to use an ensemble other than an official university ensemble must obtain permission to do so from the directors of ensembles.

Note: In addition to this requirement, the student is still required to present a lecture-recital.

For the first two required recitals in the D.M.A. program in performance and conducting, a recital preview is left to the discretion of the faculty members of each division. In divisions with no preview requirement, the option to have a preview is still available to students and faculty members. Divisions must approve the recital content well in advance but no less than three weeks before the recital date. Normally, there is no recital preview for the final recital.

All recitals and public appearances required for the D.M.A. are graded by the student’s advisory committee and the faculty of the major division. The student must achieve at least a grade of B on each recital for satisfactory completion of degree requirements.

Music Theory, Musicology, and Oral Comprehensive Examinations. Students must take written examinations in music theory and musicology when most of the course work has been completed and the research skills/language requirements have been fulfilled. Some major divisions also may require a written examination in the major area. Students entering before the spring semester of 2008 may elect to complete two theory papers in lieu of taking the written examination in music theory. After successful completion of the written examinations, the student is eligible to schedule the oral comprehensive examination administered by the student’s graduate advisory committee. Majors in performance and conducting must have presented one or two of the three required recitals before taking the examinations.

Final Recital. After successful completion of the comprehensive oral examination, the candidate in performance or conducting is eligible to present the third recital. This recital, which is analogous to the doctoral dissertation, should occur near the end of the degree program but before completion of the D.M.A. document or the D.M.A. lecture-recital.

Document, Lecture—Recital, or Large-Scale Composition. No later than the end of the semester after successful completion of the comprehensive examination, candidates in performance, conducting, and composition must submit to the graduate advisory committee a prospectus for a D.M.A. document or D.M.A. lecture-recital. A candidate in composition must submit a prospectus for a large-scale composition. The prospectus for a document or lecture-recital should include a preliminary bibliography and an outline of the content. The composition prospectus should outline a large-scale work for orchestra, with or without soloists, a work for chorus and orchestra, or an opera, and should include a preliminary analysis.

The D.M.A. document is a scholarly paper roughly equivalent in scope to a master’s thesis. The lecture-recital is a public presentation based on a paper written in scholarly form.

Upon satisfactory completion of all other degree requirements, candidates must schedule a final oral examination. For students in performance and conducting, the examination covers the third recital and the research reported in the document or lecture-recital. For students in composition, the examination is primarily a defense of the large-scale composition.

The student must receive at least a grade of B on the document, lecture-recital, or composition for satisfactory completion of degree requirements. Two unbound copies of the work must be submitted to the Graduate Division of the School of Music. The lecture-recital paper also must include a DVD or CD recording.

Composition Program

Master’s degree in composition ........................................... 30
Composition ............................................................... 16
Advanced theory and score reading ............................................. 8
MUSIC 801 Music Bibliography and Research .................................. 3
Advanced courses in musicology ......................................................... 9
MTHC 965 Doctoral Composition Recital (A complete program of original works in various media, in which the composer participates as performer or conductor) ................................................................. 2
Dissertation (A work for large ensemble, a major concerto, a work for chorus and orchestra or an opera, or a major work involving live performers and electronic media. The prospective should include a preliminary analysis.) .................................................... 16
Electives .............................................................................. 6
Compositions majors must present a public program of original compositions approximately 45 minutes in duration before being admitted to the comprehensive examination.

Conducting Programs

Band Conducting Program

Master’s degree in conducting or equivalent .................................. 30
Advanced conducting ................................................................. 12-14
Score reading ............................................................................. 4
Seminars in repertoire ................................................................. 9
MUSIC 801 Music Bibliography and Research ...................................... 3
Advanced courses in musicology and music theory ...................................... 12
Recitals ...................................................................................... 3
D.M.A. document or lecture-recital ...................................................... 3
Electives ................................................................................... 11-13

Choral Conducting Program

Master’s degree in conducting or equivalent .................................................. 30
Advanced choral conducting/score reading (must include COND 961) ........... 8-12
Advanced courses in musicology and music theory ........................................ 12
MUSIC 801 Music Bibliography and Research .................................................. 3
CHOR 920 Choral Conducting Techniques for Choral Conductors ................... 1
MENT 923 Seminar in ................................................................. 3
CHOR 910 Research Methodologies in Choral Music ....................................... 3
Choral literature .......................................................................... 9-12
Seminars in repertoire ................................................................. 6-9
COND 965 Doctoral Recitals ............................................................ 2
D.M.A. document or lecture-recital ...................................................... 3
Electives ................................................................................... 3-9
Ensembles

Orchestral Conducting Program

Master’s degree in conducting or equivalent ............................................. 30
Advanced conducting, score reading, and analysis ......................................... 16-18
Seminars in repertoire ................................................................. 9
MUSIC 801 Music Bibliography and Research .................................................. 3
Advanced courses in musicology and music theory ........................................... 12
Recitals ...................................................................................... 3
D.M.A. document or lecture-recital ...................................................... 3
Electives ................................................................................... 11-13

Conducting majors must be enrolled in an ensemble during each semester of residence.

Programs in Performance

Bassoon, Clarinet, Flute, Oboe, and Saxophone Program

Master’s degree in performance ................................................................ 30
Applied music (Four semesters, 5 hours per semester) .................................. 20
Seminars in bassoon, clarinet, flute, oboe, or saxophone ................................. 6

For programs in art, see the College of Liberal Arts and Sciences: School of the Arts chapter of this catalog.

For programs in design, see the College of Liberal Arts and Sciences: School of the Arts and the School of Architecture, Design and Planning chapters of this catalog.
### Doctor of Musical Arts | Doctor of Philosophy in Music

Recitals \(\text{(One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital)}\) \(\ldots \ldots .7\)

- **W&P 702 Special Studies in Woodwind Instrument Pedagogy** \(\ldots \ldots .3\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Advanced courses in musicology and music theory** \(\ldots \ldots .12\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .6\)

### Church Music (Choral Conducting Emphasis) Program

Master’s degree in performance \(\ldots \ldots .30\)

- **Applied chorale conducting** \(\ldots \ldots .12\)
- **Recitals (two chorale recitals, one organ or voice recital)** \(\ldots \ldots .4\)
- **Musical composition and music theory** \(\ldots \ldots .6\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Secondary applied area (organ or voice)** \(\ldots \ldots .6\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .5\)

- **D.M.A. church music majors (choral conducting emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble each semester of residence.**

### Church Music (Organ Emphasis) Program

Master’s degree in performance \(\ldots \ldots .30\)

- **ORGN 961 Directed Performance** \(\ldots \ldots .19\)
- **Advanced courses in organ** \(\ldots \ldots .6\)
- **Advanced courses in church music** \(\ldots \ldots .12\)
- **Musicology and music theory** \(\ldots \ldots .9\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Recitals (two organ recitals, one choral recital)** \(\ldots \ldots .6\)
- **Secondary applied area (organ or voice)** \(\ldots \ldots .6\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .2\)

- **D.M.A. church music majors (organ emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble each semester of residence.**

### Organ Program

Master’s degree in performance \(\ldots \ldots .30\)

- **Applied music** \(\ldots \ldots .20\)
- **Recitals (three organ recitals)** \(\ldots \ldots .6\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Advanced courses in organ** \(\ldots \ldots .12\)
- **Advanced courses in church music** \(\ldots \ldots .12\)
- **Advanced courses in musicology and music theory** \(\ldots \ldots .12\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .4\)

- **D.M.A. organ majors must be enrolled in ORGN 702 Master Class in Organ—Lab and ORGN 720 Studio Class in Organ—Lab each semester in residence.**

### Percussion Program

Master’s degree in performance \(\ldots \ldots .30\)

- **Applied music (four semesters, 5 hours per semester)** \(\ldots \ldots .20\)
- **Seminar in percussion** \(\ldots \ldots .3\)
- **Recitals (one full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital)** \(\ldots \ldots .7\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Advanced courses in musicology and music theory** \(\ldots \ldots .12\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .12\)

### Piano Performance, Literature, and Pedagogy Program

Master’s degree in performance \(\ldots \ldots .30\)

- **Applied music** \(\ldots \ldots .20\)
- **Seminars in piano** \(\ldots \ldots .9\)
- **Recitals (one full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital)** \(\ldots \ldots .7\)

- **PIAN 840 Advanced Piano Pedagogy I: Group and Class Instruction (graduate teaching assistants only)** \(\ldots \ldots .3\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Advanced courses in musicology and music theory** \(\ldots \ldots .9-12\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Minor concentration (pedagogy) or accompanying) ** \(\ldots \ldots .6\)
- **Electives** \(\ldots \ldots .6\)

- **All teaching assistants must enroll in one semester of PIAN 840.**

### Strings Program

Master’s degree in performance \(\ldots \ldots .30\)

- **Applied music (four semesters, 5 hours per semester)** \(\ldots \ldots .20\)
- **Seminars in strings** \(\ldots \ldots .9\)
- **Recitals (one full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital)** \(\ldots \ldots .7\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Advanced courses in musicology and music theory** \(\ldots \ldots .12\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .6\)

### French Horn, Trombone, Trumpet, and Tuba Program

Master’s degree in performance \(\ldots \ldots .30\)

- **Applied music (four semesters, 5 hours per semester)** \(\ldots \ldots .20\)
- **Seminar in trombone, trumpet, or tuba** \(\ldots \ldots .3\)
- **Recitals (one full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital)** \(\ldots \ldots .7\)
- **MUSC 801 Music Bibliography and Research** \(\ldots \ldots .3\)
- **Advanced courses in musicology and music theory** \(\ldots \ldots .12\)
- **D.M.A. document or lecture-recital** \(\ldots \ldots .3\)
- **Electives** \(\ldots \ldots .9\)

### Doctor of Philosophy in Music

#### Admission

The Doctor of Philosophy degree in music is offered in musicology and music theory. The applicant is expected to hold a Master of Music degree with emphasis in musicology or music theory from KU or an equivalent master’s degree from another accredited institution. In addition to the required transcripts and letters of recommendation, the applicant for admission to the Ph.D. program should submit a summary of professional training and experience and samples of original scholarly writing.

#### Ph.D. Degree Requirements

**Foreign Language Requirements.** Aspirants to the Ph.D. degree in music theory and musicology are expected to demonstrate reading knowledge of German and a Romance language chosen from French, Italian, Portuguese, or Spanish. Reading proficiency must be demonstrated before scheduling the oral comprehensive examination. The student also may be advised to develop reading proficiency in another language or languages in order to pursue research for the dissertation.

---

**Tickets for KU music and theatre performances are available from the Lied Center box office, (785) 864-ARTS, or from the Murphy Hall box office, (785) 864-3982.**

**KU music faculty members have performed at the Kennedy Center, the Lincoln Center for the Performing Arts, and Carnegie Hall.**

---

312 THE UNIVERSITY OF KANSAS 2009-2011
Course of Study. Specific course work for each student is arranged individually in consultation with the student’s adviser. The Ph.D. program normally requires four years of full-time study beyond the master’s degree, with the first two years devoted to course work. A minimum of 18 credit hours is devoted to the dissertation, an original contribution to knowledge in the student’s research area.

Students in musicology must complete at least two semesters of MUSC 654 or MUSC 656 Collegium Musicum, and two semesters of MUSC 940 Seminar on Selected Topics in Musicology. In addition, students must complete at least three more 3-credit-hour courses in musicology numbered from MUSC 650 to MUSC 799, MUSC 802, MUSC 902, or MUSC 940 and at least three more 3-credit-hour courses in music theory numbered from MUSC 655 to MUSC 830.

Although the Ph.D. program does not include a minor area, students are encouraged to continue their study of performance and/or composition, and may be advised to take nonmusic courses that are directly applicable to their fields of research for the dissertation.

For general information on academic requirements, residence, tenure, and enrollment, see the General Information chapter of this catalog.

Scholarly Presentation. Each candidate for the Ph.D. degree in musicology and music theory must make a public presentation of no less than 20 minutes on a scholarly topic. This requirement may be fulfilled by reading a paper at a national or regional meeting of a society in the student’s discipline or in a colloquium at KU.

Music Theory, Musicology, and Oral Comprehensive Examinations. Students must take written examinations in music theory and musicology when most of the course work has been completed and two research skills/language requirements have been fulfilled. Some major divisions also may require a written examination in the major area. Upon successful completion of two written examinations, the student is eligible to schedule the oral comprehensive examination administered by the graduate advisory committee. With the satisfactory completion of both written and oral comprehensive examinations the aspirant is admitted to candidacy for the degree of Doctor of Philosophy in music.

Dissertation Proposal. No later than the end of the semester, after successful completion of the comprehensive examinations, the candidate, in consultation with the faculty dissertation committee, must submit a dissertation proposal of several pages with a preliminary bibliography, outline, and description of the project and research plan.

Final Oral Examination. Following completion of the dissertation, a final oral examination is scheduled in which the candidate presents and defends the results of dissertation research and is expected to respond to questions from the faculty committee. A grade of at least B must be achieved on the dissertation for satisfactory completion of the degree requirements.

Doctor of Philosophy in Music Education

The Doctor of Philosophy emphasizes research and scholarship. It is often sought by those who aspire to careers in research and graduate-level teaching. The requirements help the student develop broad and profound understanding of musical behavior, sophisticated skill and extensive experience in pursuing new knowledge of such behavior, and a rational system for evaluating the relationships between the specialty and other areas of human understanding. The program culminates with completion of a substantial piece of original research.

Course requirements for the doctoral degree are flexible. The Ph.D. program requires a minor. Each student’s program is planned specifically in light of his or her background and to meet the needs of the anticipated academic and professional career. However, each student is expected to achieve a broad understanding of human musical behavior and to become skilled in researching such behavior. Professional competence, not hours of credit per se, is the underlying requisite for conferring the degree.

Detailed information about admission processes and the Division of Music Education and Music Therapy can be found online at www2.ku.edu/~memt.

Admission

Requirements for Regular Admission

1. Master’s grade-point average of 3.5 or higher.
2. Scores on the three basic aptitude subtests (verbal, quantitative, and analytical writing) of the Graduate Record Examination.
3. Three letters of recommendation estimating the applicant’s potential for success in doctoral study.
4. Documentation of at least 18 months of successful full-time experience as a professional music educator or at least five years or the equivalent of successful full-time experience as a professional music therapist.
5. Submission of a DVD recording appropriate to the degree emphasis. See the Graduate Application Procedure document at www2.ku.edu/~memt for details.
6. Passing score on the music education and music therapy division diagnostic examination.

Ph.D. Degree Requirements

Research Skills. Doctoral students in music education and music therapy at KU must demonstrate research skills by completing three research projects suitable for publication. These may be developed and completed independently or in consultation with appropriate doctoral faculty members. There must be a project of each of the following types: descriptive, experimental, and historical (including the history and logic of ideas). The descriptive and experimental research articles should be presented in APA style. The historical research article may be presented in Turabian, MLA, or APA style.

Each completed project is reviewed by the student’s doctoral committee, which rules in the majority whether the project is of sufficient quality for publication in a national, refereed research journal in music education or music therapy. Single-author studies that have been published or accepted for publication in such journals may be used to demonstrate these skills.

Completion of each of the three research projects must be certified by the student’s mentor/adviser in music education or music therapy on the Doctoral Checksheet in the student’s file in the division office. The mentor/adviser must submit an appropriate Progress to Degree form after the completion of each project.

Preliminary and Comprehensive Examinations. The student must pass a series of examinations, culminating with the comprehensive oral examination.

The music education/music therapy Ph.D. handbook, available in the division office, includes information about patterns of course work, the Ph.D. minor, examinations, and the dissertation.
The Bales Chorale rehearses in KU’s Dane and Polly Bales Organ Recital Hall, which is acoustically designed for the teaching and performance of organ music. For information about concerts and recitals, visit www.music.ku.edu.
The KU School of Nursing’s baccalaureate and master’s programs are accredited by the Commission on Collegiate Nursing Education, One Dupont Circle NW, Suite 530, Washington, D.C. 20036, (202) 887-6791. They are also approved by the Kansas State Board of Nursing.
**Graduate Studies | Master of Science in Nursing**

Karen L. Miller, Senior Vice Chancellor, Academic and Student Affairs and Dean  
KU Medical Center, G040 School of Nursing Bldg., Mail Stop 2006  
3901 Rainbow Blvd., Kansas City, KS 66160  
Cynthia Teel, Associate Dean, Graduate Programs  
2010 School of Nursing Bldg., (913) 588-1697  
Rita Clifford, Associate Dean, Student Affairs  
G020 School of Nursing Bldg., (913) 588-1619  
soninfo@kumc.edu or www2.kumc.edu/son  
(913) 588-1601, fax: (913) 588-1660  

Professors: Aaronson, Connors, Miller, Neuberger, Pierce, Popkess-Vawter, Smith, Warren, P. Williams  
Associate Professors: Bergquist-Beringer, Bonnel, Bott, Boyle, Clifford, Hamera, Pallikkathayil, Scheibmeir, Sousa, Teel, Wambach, K. Williams, Wingate  
Assistant Professors: Bosak, Brixy, Connelly  

Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing. Basic admission requirements are listed in the General Information chapter of this catalog. Individual graduate programs have specific requirements including prerequisite undergraduate courses. These are listed or referenced in the program descriptions. Combined degree options are available.  

The School of Nursing offers the following graduate degrees:  
- Master of Science in Nursing  
- Post-Master’s Certificate Programs  
- Doctor of Nursing Practice  
- Doctor of Philosophy  

For online information about graduate programs, see www2.kumc.edu/son.  

**Graduate Studies**  
KUMC Graduate Studies sponsors a number of interdisciplinary courses as well as courses in English as a second language. See the Graduate Studies chapter of this catalog.  

**Master of Science in Nursing**  

**Admission**  
Regular admission to the Master of Science in Nursing program requires completion of a nationally accredited baccalaureate program in nursing, a course in physical assessment, a basic graduate-level statistics course, an undergraduate average of B or above, licensure as a registered nurse in one state, and one year of work experience. Applicants are considered on an individual basis. Students who do not meet the grade-point requirement for regular admission status may be considered for admission through special admission categories.  

**M.S. Degree Requirements**  
The M.S. in Nursing requires completion of an approved curriculum with a grade-point average of B or above, a written thesis or project, and a general oral examination. The program enlarges the focus of nursing, using as its foundation the basic baccalaureate nursing program. The program’s goals are directed toward educating the clinical nurse specialist, the nurse practitioner, the nurse midwife, and the nurse leader.  

The **advanced-practice nursing major** prepares the nurse for clinical nurse specialist or nurse practitioner positions. The clinical nurse specialist track includes adult/gerontological nursing. It prepares nurses to perform in the expanded role of caring for a particular kind of patient/client or to function in a particular kind of setting. The nurse practitioner track prepares nurses to provide primary health care to clients and families across the life span. Family nurse practitioner, adult/gerontological nurse practitioner, and psychiatric/mental health nurse practitioner tracks are available. The nurse practitioner is prepared to provide primary health care in a variety of settings.  

The **nurse midwife major** focuses on the care and management of well-women’s primary and reproductive health care needs throughout the life span.  

The **leadership major** includes tracks in organizational leadership, public health nursing, clinical research management, and health care informatics. The organizational leadership track prepares nurses to assume leadership positions in hospitals and other health agencies. The public health track prepares nurses to develop advanced community-based interventions and determine outcomes with emphasis on health promotion and disease prevention strategies for a targeted population. The clinical research management track prepares the nurse to plan and implement clinical research trials. The health care informatics track prepares the nurse with skills in analysis, design, implementation and evaluation of information systems that support a full range of clinical and patient care functions.  

**Post-master’s certificate programs** include Family Nurse Practitioner, Health Care Informatics, Health Professions Educator, Nurse Midwifery, Organizational Leadership, Psychiatric Mental Health, Clinical Research Management, and Public Health Nursing. Additional content areas are being developed as post-master’s certificates.  

Students in the leadership major may choose one of two joint degree options. Students may combine the Master of Science in nursing (organizational leadership) with the Master of Health Services Administration or the Master of Science in nursing (public health nursing) with the Master of Public Health. By combining some course work, the two degrees may be completed in fewer hours than if they were pursued independently.  

**Program Components.** All majors present a theoretical base, part of which is held in common and included in courses completed by all master’s students. The theoretical base specific to each major is included in the major courses and accompanied by clinical or practical experience that allows the student to apply the theory in a health care setting.  

The M.S. in nursing curriculum has four major components. These are the common core, advanced-practice or leadership core, 

The leadership major in the M.S. program includes tracks in organizational leadership, public health nursing, clinical research management, and health care informatics.  

See pages 12-13 for admission procedures.
research, and clinical or functional specialization segments. Forty-five credit hours are required for the clinical nurse specialist track, 45 to 48 hours for the nurse practitioner track, 46 for the nurse midwife track, and 37 hours for each track in the leadership major.

**Common Core.** Common core nursing courses provide the core knowledge and skills essential to the nurse practicing in any advanced area of nursing. Courses in this area are NRSG 748, NRSG 754, and NRSG 755.

**Advanced-Practice Core.** Advanced-practice core courses provide the basis for expert clinical patient care. Courses in this category are NRSG 731, NRSG 806, NRSG 809, NRSG 810, NRSG 812, and NRSG 813.

**Leadership Core.** Courses provide the theoretical basis for the organizational leadership track, the public health nursing track, the clinical research management track, and the health care informatics track. Courses in this category are NRSG 808, NRSG 820, NRSG 880, NRSG 885, and NRSG 826.

**Research.** Research courses focus on the ability of the nurse to understand and use research and to participate in the development of new knowledge in nursing and health care. Courses in this category are NRSG 754, NRSG 898, or NRSG 899.

**Clinical/Functional Specialization.** Courses in this category provide the information necessary for advanced practice. The student may choose clinical nurse specialist, nurse practitioner, nurse midwife, or leadership tracks (organizational leadership, public health nursing, clinical research management, or health care informatics).

**Advanced-Practice Nursing Core Tracks.** Courses for the clinical nurse specialist track and nurse practitioner track can be identified by their titles.

**Nurse Midwife.** Courses can be identified by their titles.

**Leadership.** Courses for Organizational Leadership are NRSG 881, NRSG 883, NRSG 884, NRSG 886, and HP&M 814. Courses for Public Health Nursing are NRSG 809, NRSG 827/NRSG 828, NRSG 829, and PRVM 800 and PRVM 830. Courses for Clinical Research Management are NRSG 823, NRSG 824, NRSG 825, and NRSG 833. Courses for Health Care Informatics are NRSG 853, NRSG 854, NRSG 855, NRSG 856, and NRSG 858.

**Thesis/Project Option.** The student may choose to complete a thesis for 6 credit hours or to complete a project for 2 credit hours. The project involves applying aspects of the research process to the student’s area of nursing practice. A number of options are available for the project. Both thesis and project involve a formal paper and an oral examination covering the area of study.

**Flexible Scheduling.** The majority of students in the M.S. program are part-time students. Most of these students are employed full time. Therefore, many courses are offered online. In addition, most on-campus classes are scheduled to accommodate employed students. These flexible schedules allow students to combine graduate study with work responsibilities. In addition, selected students who are registered nurses can pursue the baccalaureate degree and the master’s degree in nursing by taking some courses concurrently in the undergraduate and graduate programs.

**Doctor of Nursing Practice**

The Doctor of Nursing Practice degree prepares advanced-practice nurses at the highest level of nursing practice. The D.N.P. offers sophisticated, cutting-edge experiences that help nurses actively engage in a complex, dynamic, and demanding healthcare field. Skills in collaboration, innovation, and evaluation, complemented by advanced-practice nursing skills, prepare nurses to shape the future of health care. Advanced-practice nurses provide patient-centered care that is evidence-based, contribute to the development of evidence-based practice, and pursue leadership roles in a variety of health care and educational settings.

**Specialty Tracks**

The KU School of Nursing D.N.P. offers nurses a variety of specialty tracks in two majors:

**Advanced-Practice Majors**
- Adult/Gerontological Clinical Nurse Specialist
- Adult/Gerontological Nurse Practitioner
- Family Nurse Practitioner
- Certified Nurse Midwife
- Certified Nurse Anesthetist
- Psychiatric/Mental Health Nurse Practitioner
- Nurse Anesthesia

**Leadership Majors**
- Health Care Informatics
- Organizational Leadership
- Public Health

**Entry Options**

For the 2009-10 and perhaps the 2010-11 academic years, the KU School of Nursing D.N.P. is a post-master’s-only program.

**Post-Master’s D.N.P. Program Admission Criteria**

1. Completion of a master’s degree in nursing from a nationally accredited program.
2. Preference is given to applicants with 3.25 grade-point averages in the master’s program; the minimum grade-point average in the master’s program to be considered is 3.0.
3. Potential for leadership and application of scholarship in nursing.
4. Potential to provide expert advanced clinical care.
5. National certification in specialty area (if available).
6. In the case of international students, Test of English as a Foreign Language or International English Language Testing System scores are considered.

**Post-Baccalaureate D.N.P. Program Admission Criteria**

(possibly beginning fall 2010)

1. Completion of a B.S.N. from a nationally accredited program.
2. Preference is given to applicants with 3.5 grade-point averages in the B.S.N. program; the minimum grade-point average in the B.S.N. program to be considered is 3.0.
3. Potential for leadership and application of scholarship in nursing.
4. Potential to provide expert advanced clinical care.
5. In the case of international students, Test of English as a Foreign Language or International English Language Testing System scores are considered.

**Admission Process**

The application deadline is March 1 for fall semester. Applications for spring and summer admission are considered on a space-available basis. See the KU School of Nursing Web site for application deadlines if space becomes available.

Applicants must submit the following:
- Completed application for graduate study;
- Official transcripts of all academic work toward the bachelor’s and master’s degrees in nursing (KUMC provides the University of Kansas record);
- Three references from advanced-practice nurses, nursing faculty, or physicians who are able to attest to the applicant’s potential ability to practice at the highest level of advanced nursing practice and to engage in scholarly activity and leadership roles;
- A statement of career goals and practice interests;
- A résumé;
- Evidence of current licensure as a professional nurse in one state;
- Nonrefundable application fee: check or money order payable to the University of Kansas School of Nursing. See the School of Nursing Web site for the fee.
Doctor of Nursing Practice | Doctor of Philosophy in Nursing

The admissions committee of the School of Nursing reviews application materials. Specialty area faculty may request an interview with a student.

Curriculum
The post-baccalaureate D.N.P. program requires the following:
1. Completion of a master’s degree in nursing from a nationally accredited program is required.
2. Preference is given to students with 3.25 grade-point average for the master’s degree in nursing.
3. Required Graduate Record Examination scores are 1,000 on the verbal and quantitative sections and at least 5 on the analytical writing section (or a score of 1,500 on the three-part GRE, if taken before October 2002).
4. Potential for leadership and scholarship in nursing should be demonstrated.

Post-Baccalaureate Option
1. Completion of a baccalaureate degree in nursing from a nationally accredited program is required.
2. Satisfactory completion of the following courses:
   - Basic Statistics—3 credit hours
   - Analysis of Variance—3 credit hours
3. A cumulative grade-point average of 3.5 on a 4.0 scale.
4. Required Graduate Record Examination scores are 1,000 on the verbal and quantitative sections and at least 5 on the analytical writing section (or a score of 1,500 on the three-part GRE, if taken before October 2002).
5. Potential for leadership and scholarship in nursing should be demonstrated.

Doctor of Philosophy in Nursing
The Ph.D. program prepares graduates to function in faculty positions in college and university settings; to conduct independent research and scholarly endeavors in nursing; to generate and expand the theoretical, empirical, and philosophical bases for nursing practice; and to provide leadership to the profession and interpret nursing to society. Students have opportunities to expand their theoretical knowledge and research skills in a minor area, to develop expertise in nursing theory development, to expand research skills, and to gain a historical and philosophical perspective that broadens their professional orientation and provides a basis for understanding changing social expectations, cultural perspectives, and economic and political trends.

Program Options
The doctoral program is offered in two formats: in the classroom and online. Students can choose the format that best meets their needs and learning styles. There must be a sufficient number of students in a format for it to be offered each year.

Students can apply to the doctoral program after completing the master’s degree in nursing or after completing the baccalaureate degree with a major in nursing. The post-baccalaureate entry option is for exceptionally well-qualified B.S.N. graduates whose career goals are research oriented and who wish to progress as rapidly as possible toward the doctorate in nursing.

Admission Criteria

Post-Master’s Option
1. Completion of a master’s degree in nursing from a nationally accredited program is required. Prerequisite preparation must include the following courses:
   - Basic Statistics—3 credit hours
   - Analysis of Variance—3 credit hours
2. Preference is given to students with 3.25 grade-point averages for the master’s degree in nursing.
3. Required Graduate Record Examination scores are 1,000 on the verbal and quantitative sections and at least 5 on the analytical writing section (or a score of 1,500 on the three-part GRE, if taken before October 2002).
4. Potential for leadership and scholarship in nursing should be demonstrated.

Course Requirements

Major: Nursing. The nursing portion of the doctoral program has three major components: theory, empirics, and leadership. A total of 50 hours of course work is required.

Theory (6 hours)
- NRSG 940 Knowledge and Theory Development in Nursing Science ............ 3
- NRSG 942 Theory Application in Nursing Science ................................. 3

Empirics (14 hours)
- NRSG 943 Methods for Quantitative Research ...................................... 3
- NRSG 944 Quantitative Research Application ........................................ 3
- NRSG 946 Measurement Principles and Practice ................................... 3
- NRSG 802 Methods for Qualitative Research ........................................ 3
- NRSG 947 Quantitative Research Application ....................................... 3

Leadership (13 hours)
- NRSG 935 Professionalism and Scholarship Workshop ......................... 1
- NRSG 938 Informatics and Technology applications .............................. 2
- NRSG 941 Preparing for Doctoral Leadership ...................................... 3
- NRSG 945 Synthesis Workshop I ...................................................... 3
- NRSG 877 Foundations in Education and Learning ................................ 3
- NRSG 948 Advanced Organizational and Clinical Quality ..................... 2
- NRSG 949 Synthesis Workshop II ................................................. 1

Minor. This includes 11 hours of courses in the student’s area of choice. These courses also must support the student’s research. Examples are American studies, anatomy, anthropology, biochemistry, business, child development, communication, economics, education, history, pathology, pharmacology, philosophy, physiology, political science, psychology, sociology, or any other graduate area offered by KU.

Support Courses. This area requires these courses:

Statistics (6 hours)
- Regression Analysis ................................................................. 3
- Multivariate Analysis .............................................................. 3

Dissertation. Each student must complete a study that shows the planning, conduct, and results of original research. See Doctoral Degree Requirements, Dissertation, in the General Information chapter of this catalog. The minimum number of post-comprehensive dissertation credit hours is 15.

KU’s nurse midwifery graduate program is ranked ninth in the nation among public universities, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009. KU’s master’s program in nursing ranked 28th in the nation in 2009.
The program also requires foreign language or research skills competence, satisfactory completion of two qualifying examinations, satisfactory completion of a comprehensive oral examination, and dissertation defense.

Post-Baccalaureate Entry Option. Students in the post-baccalaureate entry option complete a minimum of 71 credit hours, including dissertation. Students do not earn a master’s degree. However, students who want a clinical focus for research may develop the program around an advanced-practice focus and seek Advanced Registered Nurse Practitioner status. In addition to the courses above, the following are required:

Empirical

NRSG 754 Health Care Research .................................................. 3
Theory

NRSG 748 Theories for Practice and Research: Individual, Family, and Community........................................................................ 3
Minor. Twenty-one to 23 hours are required for the advanced-practice focus. Total. A total of 71 credit hours is required for advanced practice.

Nursing Courses

NRSG 505 Caregiving: Creating Partnerships with Families (2-3).

NRSG 506 Nursing Case Management of the Older Adult (2-3).

NRSG 507 Pain Management (2).

NRSG 508 Violence: The Forensic Perspective (2).

NRSG 509 Therapeutic Touch: The Krieger-Kunz Method (2).

NRSG 510 Health Care at the End of Life (2).

NRSG 514 Nursing, Health Care, and Human Sexuality (2).

NRSG 550 Research Coordinator: Pre-Study Activities (3).

NRSG 551 Research Clinical Trial Coordinator: During Study Activities (3).

NRSG 552 Research Clinical Trial Coordinator: Post-Study Activities and Practicum Experience (3).

NRSG 556 Interdisciplinary Wellness Promotion for People with Psychiatric Disabilities (2).

NRSG 564 Health Care of Persons with Patterns of Addiction (1-2).

NRSG 565 Nursing Care of Persons with Patterns of Chemical Dependency: Practicum (2).

NRSG 572 Topics for Health Professional Educators (2-3).

NRSG 576 Promoting Wellness: Community Experience with People with Psychiatric Disabilities (2).

NRSG 701 CNL Residency I (6). This course is designed to develop the clinical nurse leader’s role in devising solutions to system and/or aggregate client problems. Accent of this practicum enhances the students ability to manage information and integrate it with clinical practice (collection and review of data). Using this data, the student creates an environment that results in improved individual and group clinical outcomes on an identified unit. Prerequisite/Corequisite: CNL II LEC.

NRSG 720 Introduction to Nursing Informatics (2). This course will provide an overview of hospital information systems, nursing information systems, artificial intelligence and micro and mainframe computers. Interactive laboratory experiences will examine clinical problem solving in nursing education, nursing research, nursing practice, nursing administration. Prerequisite: Admission to the graduate nursing program or consent of instructor. LEC.

NRSG 721 Understanding and Changing Health Behavior (3). Student is introduced to theories, research, and issues related to health behavior. Health behavior includes actions or activities undertaken for the purpose of promoting, preserving, or restoring wellness, and actions or activities that endanger wellness or cause illness. Internal and external influences are considered. The problems encountered by persons who are attempting to change their own health behaviors are discussed. The role of nurses in changing health behaviors in individuals, families, communities, and the larger society are examined. Prerequisite: NRSG 702 or consent of instructor. LEC.

NRSG 722 Scholarly Writing for the Health Professional (3). Development of scholarly writing skills emphasized to promote professional communication and to enhance professional image. Students enrolled in this interdisciplinary course analyze their own and others’ writing to improve their written communications. Writing skills are practiced and developed by critiquing published articles, and by preparing written memorandums, letters, abstracts, and a manuscript.
Nursing Courses

risk for genetic disorders is emphasized through the use of case studies. Ethical, legal, and professional issues and practices in care of patients with genetic disorders are addressed. Prerequisite(s)/Corequisite(s): Must be enrolled in Graduate Nursing Program, or consent of instructor. LEC

NRSG 807 The Social Context for Health Care Policy (2). Using a local/single-community focused approach, the following critical dimensions of social policy context are discussed: Local exemplars are used throughout the course to demonstrate the leadership and structural systems required to effect change in policy. Strategies to identify constituencies and build coalitions are studied. Prerequisite (corequisite): NRSG 853, or consent of instructor. LEC

NRSG 808 Health Promotion and Community Health (3). Current trends in health promotion and prevention are explored. The role of the community in planning and delivering health promotion programs is emphasized. Prerequisite(s): Corequisite(s): Must be enrolled in Graduate Nursing Program, or consent of instructor. LEC

NRSG 810 Advanced Health Assessment and Physical Diagnosis (5). Building upon basic health assessment, knowledge and skills for advanced clinical practice are discussed, described and demonstrated. The advanced clinical practice content is then applied in multiple clinical settings (120 hours of clinical practice is required). Content on special populations (i.e., children, geriatrics, women’s health) is followed by directed laboratory and simulated experiences. The concepts of clinical decision making for differential diagnosis are introduced and applied to patient-focused data. Prerequisite and Corequisite: Consent of Instructor. LEC

NRSG 813 Applied Drug Therapy (4). Advanced level pharmacology course with scientific knowledge base relevant to selected pathophysiological states confronted in primary care is explored. Information is provided for the formulation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age-specific and developmental differences of clients with clinical diagnosis and management. Application is made through age appropriate examples. Prerequisite: NURA 806/NRSG 806, or consent of instructor. LEC

NRSG 815 Primary Care Practicum: Management of Common Health Problems Throughout the Life Span (3). Opportunities to develop beginning skills as advanced practice nurses in a primary care setting are provided. Emphasis is on assessment, clinical decision making, and management of clients/client systems of all ages/stages who are experiencing common health problems. Internal and external environmental factors as well as legal, ethical and economic concerns related to the presenting common health problems are explored. Current research outcomes and theory based interventions appropriate for management by advanced practice nurses are stressed. Collaboration and consultation (including referrals) with appropriate health providers is emphasized. Corequisite: Consent of Instructor. LEC

NRSG 816 Primary Care II: Management of Complex Health Problems Throughout the Life Span (3). Complex health problems seen in individuals and families throughout the life span are discussed in this first of two sequential courses. Applications of current research and theory based interventions appropriate for protocol based management by advanced practice nurses are stressed. Strategies to manage common health problems, in urban and rural patients, are explored. Interventions to restore individual and family level of pre-illness health, and positive health behaviors are highlighted. Prerequisite (or Corequisite): Consent of instructor. LEC

NRSG 818 Primary Care III: Preceptorship (3-5). The theoretical, clinical, and role components of care as managed by nurse practitioners are emphasized. Prerequisite(s)/Corequisite(s): Must be enrolled in Graduate Nursing Program, or consent of instructor. LEC

NRSG 819 Advanced Pathophysiological Assessment (3). Systems approach to advanced physical assessment, pathophysiological principles of hemodynamic monitoring, electrocardiography, pulmonary artery monitoring, and neuromuscular assessment. Emphasis in the evaluation of the acute care and/or surgical patients. Emphasis will be on the cardiovascular, pulmonary, and neurological systems and their relation to the assessment and monitoring practices of the health care provider. Prerequisite: Consent of Instructor. LEC

NRSG 820 Organizational Culture and Program Planning (2). Advanced course necessary to inform, guide, and persuade clients, health care providers, payers, and other publics are discussed. Special management, and program management. Means of using evolving information technologies to improve communication are emphasized. Prerequisite (or Corequisite): NRSG 880 or consent of instructor. LEC

NRSG 821 Clinical Dynamics and Interventions in Diabetology (3). A complexity science framework is used to discuss current and innovative concepts and trends in diabetes management. Personal worth, quality of life, lifestyle changes, ethical, legal, and social issues are discussed. Fall and spring intersessions are offered. Prerequisite(s): Consent of instructor. LEC

NRSG 822 Global Perspective and Diversity in Health Care (2). Cultural receptivity is emphasized. Ethical and social justice concerns as well as public policy and legislative issues in population-focused health care are discussed. Selected models, concepts, theories, and research in public health provide the framework for identifying, assessing, and promoting diversity in health care. Prerequisite(s): Consent of instructor. LEC

NRSG 823 Research Clinical Trial Management: Pre-Study Activities (3). This course is designed as an introduction to the research clinical trial manager role and provides in-depth knowledge of Pre-Clinical Trials Study activities. Regulatory, administrative, and ethical issues will be presented as they apply to the day-to-day operational requirements (study design, financial aspects, protocols, hiring of personnel, subject recruitment, etc.) to begin a study. Included is the development of training skills for the Clinical Trial Manager for critiquing sample protocols and for assessing adequate resources for implementation of protocol. Prerequisite(s): RN Licensure, graduate level, or consent of instructor. LEC

NRSG 824 Research Clinical Trial Management: During Study Activities (3). This course is designed as a research clinical trial manager role and provides in-depth knowledge of During-Clinical Trial Study activities. The process of conducting the ‘day-to-day’ operations of a research study; subject recruitment, data collecting forms and documenting subjects’ responses to the interventions, au -diting, data, budget monitoring, ethical/liability issues that occur during the study, etc. will be addressed. Included is the development of training skills for the Clinical Trial Manager that is involved in conducting the ‘day-to-day’ operations of the research study. Prerequisite(s): NRSG 823 or consent of instructor. LEC

NRSG 825 Research Clinical Trial Management: Post-Study Activities and Practicum Experience (3). This course provides an introduction to the research manager role and provides in-depth knowledge of Post-Clinical Trial Study activities. The process of conducting the ‘day-to-day’ operations of a research study: preparing for final sponsor and FDA visits; preparing final reports to the sponsor and IRB; evaluating sponsor, site and team members’ performance; management of data and preparing summary reports, etc. will be addressed. The course provides the student with a Research Manager practice experience in selected research setting. Opportunities are provided to utilize learned details related to the role of a Research Manager during key phases of a Clinical Trial Study: pre-study, during-study, and at the end-study activities. Prerequisite(s): NRSG 824, or consent of instructor. PRA NRSG 826 Cultural Competence Practicum in Global Health (2). Cultural receptivity is integrated into the collaboration, development, and implementation of health programs at the local, national, and international level. Frameworks that emphasize the meanings of health and health care; prevention and management; and related ethical, economic, and social justice concerns are explored as societal values are examined in terms of common values and inter-
NRSG 828 Public Health Nursing: Practicum I (3). Students are provided with an opportunity to explore advanced practice roles within the context of public health needs. Based on each student’s goals and health-related needs, an identified population are assessed, analyzed, and synthesized; and a plan of action proposed. Corequisite: NRSG 827 or consent of instructor. LEC

NRSG 829 Public Health Practicum (3). Students will complete an intensive practicum focused on a community health nursing role. (Same as PRV 891) Prerequisite: NRSG 827 or permission of instructor. LEC

NRSG 830 Care of Women in the Antepartal Period (2). Care during the antepartal period in healthy pregnant women is presented and analyzed. Strategies focusing on risk reduction and early identification of deviation from norm in this client system are examined. Models of care and practice modalities are described. Nursing responsibilities are identified as delivered by the advanced practice student are implemented. This course is designed to help nurses develop the knowledge of self-care practices and public health regulations, as well as to develop the knowledge foundation for the management of clinical research. (Same as PRV 890) LEC

NRSG 832 Nurse Midwifery in the Neonatal Period and Practicum (1). Synthesis of the nurse-midwifery philosophy for well neonates is conceptualized. Health maintenance models of care for infant client systems up to the first 28 days of life are included. Biophysical, psychological, and emotional factors, pharmacotherapeutics, health promotion, and selected high-risk deviation from normal are included. Clinical competencies for nurse-midwifery management of well neonates up to first 28 days of life are developed. Management experiences include the nurse-midwife role in collaboration, co-management, and referral when medically necessary. Does not count toward any course within the early newborn period. Prerequisite or Corequisite: NRSG 830 or consent of instructor. LEC

NRSG 833 Managing Clinical Research Projects (3). This course is designed to help nurses develop in-depth knowledge of good clinical practices and federal regulations, as well as to develop the knowledge foundation for the management of clinical research program. Regulatory, administrative, and ethical issues will be presented as well as the daily operational requirements of managing a clinical research office. Completion of this course prepares for clinical research management position. Prerequisite(s): RN licensure, graduate level, or consent of instructor. LEC

NRSG 834 Nurse-Midwifery in Women’s Health Care Practicum (2). The nurse-midwifery management process is applied. Development of beginning competencies for promotion clinical nurse-midwifery management of well women client systems seeking gynecologic, contraceptive, health promotion, and maintenance services are included. Nurse-midwifery students experience delivery of care in independent practice environments as well as collaboration, co-management, and referral when medically necessary. Prerequisite: NRSG 830 or consent of instructor. Corequisite: NRSG 835 or consent of instructor LEC

NRSG 835 Primary Women’s Health Care Across the Life Span (3). Psychological, sociological, and physiological issues of health and human functioning of the female client are examined. Corequisite: NRSG 812, Advanced Pathophysiology, NRSG 813, Applied Drug Therapy, NRSG 844, Psychiatric Assessment for Advanced Nursing Practice; or consent of instructor. LEC

NRSG 836 Nurse Midwifery in the Intrapartal and Post Partum Period (3). Nurse-midwifery care of uncomplicated mother/infant client systems through the intrapartal, postpartal, and neonatal period are presented and analyzed. Intrapartal and Postpartal complications and emergency events are addressed. Complementary practice models demonstrating various management modalities are described. Concepts of care and practice modalities are described. Concepts of collaborative, co-management, and referral when medically necessary. Corequisite: NRSG 836 or consent of instructor. LEC

NRSG 837 Nurse Midwifery in the Intrapartal and Postpartal Period Practicum (2). Complementary practice models for advanced practice nursing for low risk healthy women during labor, birth, and postpartum are demonstrated. The development of a skill base for intrapartal emergences is addressed. Nurse-midwifery role provides for the role of care provider during normal labor and delivery postpartum and in collaboration, co-management, and referred when medically necessary. Corequisite: NRSG 836 or consent of instructor. LEC

NRSG 838 Primary Care of Women Through the Life Span Practicum (1-2). This practicum is designed to increase competencies in the role of primary care provider regarding primary care and gynecologic management of women throughout the life span. Health promotion, complimentary therapies, and evidence based models of health care delivery are incorporated in the care of women. Clinical management experiences in the advanced practice role is not limited to health promotion, and primary care for women from adolescence through menopause. Clinical experiences will include collaboration, co-management, and/or referral when medically necessary. Prerequisite/Corequisite: NRSG 830 or consent of instructor. LEC

NRSG 840 Care of Women Integration Practicum (4). The theoretical, clinical and role components of care as delivered by the advanced practice student are implemented through an intensive supervised clinical practicum. Advanced professional clinical skills are developed. Students will demonstrate the ability to manage acute and chronic conditions and new borns. The client system for this experience includes well women, child-bearing women and may include neonates in a variety of environments. Emphasis is on critical thinking, independent decision making, and the application of advanced practice of nurse-midwifery. Prerequisite: Consent of instructor. LEC

NRSG 842 Topics in Mental Health Nursing (1-5). Investigation of special issues or problems relevant to selected client systems in mental health nursing. Prerequisite: One graduate course in mental health nursing or consent of instructor. LEC

NRSG 844 Psychiatric Assessment for Advanced Nursing Practice (2). Advanced assessment of psychiatric assessment of children, adults, and the elderly will be covered including conducting caring and competent interviews in simulated situations. Assessment for psychiatric diagnosis including suicide and homicide potential, substance abuse, grief, mood and anxiety disorders, and developmental disabilities will be emphasized. Prerequisite or Corequisite: NRSG 810 or consent of instructor. LEC

NRSG 845 Psychiatric Mental Health Nursing: Short-Term Illness (3). Short-term mental health problems (e.g., crises and grief reactions) and psychiatric disorders (e.g., anxiety, mood and behavior problems) are examined. Complementary practice models demonstrating various management modalities are described. Nursing responsibilities are identified as delivered by the advanced practice student in short-term and episodic interventions with individuals, groups, and families is implemented. Students have opportunities to complete assessments, formulate diagnoses, and implement psychotherapy for culturally diverse clients from different age groups. Theory and research based nursing therapeutic interventions and standards of practice are applied in an artful manner. Corequisite: NRSG 845 Psychiatric Mental Health Nursing: Short-Term Illness. LEC

NRSG 847 Psychiatric Mental Health Nursing: Chronic Illness (3). Individual, family, and group client systems with chronic and complex alterations in psychological functioning are managed over time. Selected theoretical frameworks (such as biobehavioral, including psychopharmacological interventions, rehabilitation, and psychosocial interventions) are used in examining factors that contribute to alterations in psychological functioning. Likewise, these frameworks and research outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 748 Theories for Practice and Research, NRSG 754 Health Care Research, NRSG 810, Advanced Health Assessment and Physical Diagnosis, NRSG 812 Advanced Pathophysiology, 844, Psychiatric Assessment for Advanced Nursing Practice; or consent of instructor. LEC

NRSG 848 Psychiatric Mental Health Nursing: Chronic Illness, Practicum (4). Individual, family, and group client systems with chronic and complex alterations in psychological functioning are managed over time. Selected theoretical frameworks (such as biobehavioral, including psychopharmacological interventions, rehabilitation, and psychosocial interventions) are used in examining factors that contribute to alterations in psychological functioning. Likewise, these frameworks and research outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 748 Theories for Practice and Research, NRSG 754 Health Care Research, NRSG 810, Advanced Health Assessment and Physical Diagnosis, NRSG 812 Advanced Pathophysiology, NRSG 813, Applied Drug Therapy, NRSG 844, Psychiatric Assessment for Advanced Nursing Practice, or consent of instructor. LEC

NRSG 849 Psychiatric Mental Health Nursing: Chronic Illness, Practicum (3-5). The integration of the psychiatric mental health advanced practice nursing role is implemented. Students have opportunities to use diagnostic reasoning, psychotherapy, pharmacological interventions, interdisciplinary treatment plans, psychoeducation, consultation, referral, and research findings in the management and evaluation of culturally diverse clients from different age groups. The client system for this experience is included in individuals, groups, and families. Emphasis is on prevention of illness, stabilization of the client system, minimization of complications, and promotion of optimal level of health through interdisciplinary collaboration. Prerequisite: NRSG 845 Psychiatric Mental Health Nursing: Short-Term Illness, NRSG 847 Psychiatric Mental Health Nursing: Chronic Illness, or consent of instructor. LEC

NRSG 850 Psychiatric Mental Health Nursing Care of Children and Adolescents (3). This is an advanced course in child and adolescent development for those individuals who desire to gain greater knowledge and depth in the complex issues of mental health issues in children, adolescents and their families. Acute, short term mental health problems and ongoing psychiatric disorders whose onset are in childhood or adolescence are discussed. Developmental, biobehavioral, crisis theories, and supporting outcome research are analyzed as they apply to children/adolescents and families. The client system for this experience includes individuals, groups, and families. Emphasis is on prevention of illness, stabilization of the client system, minimization of complications, and promotion of optimal level of health through interdisciplinary collaboration. Prerequisite: NRSG 845 Psychiatric Mental Health Nursing: Short-Term Illness, NRSG 847 Psychiatric Mental Health Nursing: Chronic Illness, or consent of instructor. LEC

NRSG 851 Psychopharmacology for Advanced Nursing Practice (3). Understanding of the neuron, neurotransmitter and receptor functioning as the basic for psychopharmacotherapy is emphasized in developing the knowledge for prescribing and monitoring...
ing psychotropic medications for clients diagnosed with psychiatric disorders. The major classes of psychotropic medications include antipsychotics, antidepressants, mood stabilizers, and sedatives. Adverse reactions, pharmacokinetics, and interactions are discussed. Drug therapy is reviewed and consideration is given to the management of side effects and potential drug interactions.

NRSG 852 Topics in Pediatric Nursing (1-5). Investigation of special problems of a selected group of infants, toddlers, children, or adolescents in pediatric nursing. Prerequisite: One graduate clinical course in pediatric nursing. Prerequisite: One graduate clinical course in pediatric nursing or consent of instructor. LEC

NRSG 853 Abstraction and Modeling of Health Care Information (3). This information system development life cycle process is presented with emphasis on the determination and analysis of the system requirements and system design that meet the identified health information requirements. Prerequisites: NRSG 854, Knowledge Management in Health Care, NRSG 855, Topics in Health Informatics, and NRSG 863, or consent of instructor. Prerequisite: One graduate clinical course in health informatics or consent of instructor. LEC

NRSG 854 Knowledge Management in Health Care (3). Knowledge management is the creation, communication, and leveraging of knowledge and information assets in health care organizations. Defining knowledge, describing the knowledge creation cycle, and the identification of the knowledge worker and his/her impact on the organization are discussed. Information technology and communities of practice are presented in a balanced approach setting up a systematic viewpoint of the knowledge management process. Knowledge management theory is enhanced with the performance of a knowledge audit and the development of knowledge management tools. Prerequisites: BUS 738, NRSG 820, or consent of instructor. LEC

NRSG 855 Topics in Health Informatics (3). Investigation of special issues and trends relevant to health care informatics. Prerequisite: One graduate course in information or consent of instructor. LEC

NRSG 856 Health Informatics Practicum (1-3). In collaboration with health care informatics faculty, preceptors, students design an experience to facilitate application of theories and research in health informatics. Emphasis is placed on the application and evaluation of the information system development life cycle. Students analyze the leadership and technical behaviors of various informatics roles and negotiate an informatics project to be completed within the practicum. Prerequisites: All Common Core, Leadership Core, NRSG 853, Abstraction and Modeling of Health Care Information, NRSG 858, Health Data: Theory and Practice. Prerequisite or Corequisite: NRSG 854, Knowledge Management in Health Care, NRSG 855, Topics in Health Informatics, or one of the assigned projects or from a student-proposed idea. Prerequisite: none (previous or simultaneous enrollment in Health Data Theory and Practice is recommended). LEC

NRSG 860 Health Care at the End of Life (3). Complex issues that influence care for clients and their families systems at the time of and surrounding death provide the focus for this course. Complex issues arising from the intersection of biological, physical, psychological, sociological, and spiritual factors are explored. Historical, cultural, legal, and ethical issues are examined. Attention is given to frameworks for program evaluation, methods of decision-making, and strategies for engaging diverse students in utilizing diagnostic reasoning, nursing therapeutic, and interdisciplinary approaches. Opportunities are provided to individualize the student's clinical acumen in utilizing diagnostic reasoning, nursing therapeutic, and interdisciplinary approaches. Prerequisite: Consent of instructor. LEC

NRSG 861 Topics in Adult Nursing (1-5). Investigation of special issues or problems relevant to a selected client system in Adult Nursing. Prerequisite: One graduate clinical course in Adult Nursing or permission of the instructor. LEC

NRSG 862 Adult/Gerontological Health Care I (3). Knowledge and skills necessary to provide holistic care for the culturally diverse adult in multiple care settings are emphasized. Clinical manifestations of and patient response to selected problems of cardiovascular, respiratory, renal, uterine, endocrine, reproductive and gastrointestinal systems are discussed. Prerequisites: NRSG 863 or NRSG 864. LEC

NRSG 863 Adult/Gerontological Health Care II (3). Knowledge and skills necessary to provide holistic care for the culturally diverse adult in multiple care settings are emphasized. Clinical manifestations and patient response to selected problems of cardiovascular, respiratory, renal, uterine, endocrine, reproductive and gastrointestinal systems are discussed. Prerequisites: NRSG 863 or NRSG 864. LEC

NRSG 864 Adult/Gerontological Health Care I: Practicum—NP (2). Assessment of adults across the life span and the management of common acute and chronic health problems are executed in consultation with the appropriate provider. Opportunities to manage pharmacological and medicinal therapeutics will be provided. Consultation and shared care models are explored. Prerequisites: NRSG 863/864. LEC

NRSG 865 Adult/Gerontological Health Care II (3). Knowledge and skills necessary to provide holistic care for the culturally diverse adult in multiple care settings are emphasized. Physical and multidimensional functional assessments are emphasized as a basis for establishing differential diagnosis and planning effective therapeutic interventions. Consultation and shared care models are explored. Opportunities to manage pharmacological and medical therapeutics will be provided. Prerequisites: NRSG 863/864. LEC

NRSG 866 Adult/Gerontological Health Care II: Practicum—NP (2). Assessment of adults across the life span and the management of common acute and chronic health problems are executed in consultation with the appropriate provider. Consultation and shared care models are explored. Opportunities to manage pharmacological and medicinal therapeutics will be provided. Prerequisites: NRSG 863/864. LEC

NRSG 867 Adult/Gerontological Health Care II: Practicum—NP (1-5). Investigation of special issues or problems relevant to a selected client system in Adult Nursing. Prerequisites: NRSG 863/864. LEC

NRSG 868 Adult/Gerontological Health Care III: Preceptorship—NP (3-5). The theoretical, clinical, and research role components of care as delivered by the adult/gerontological nurse are explored. Opportunities are provided to individualize the student’s clinical acumen in utilizing diagnostic reasoning, nursing therapeutic, and interdisciplinary approaches. Prerequisites: Consent of instructor. LEC

NRSG 869 Adult/Gerontological Health Care III: Preceptorship—NP (3-5). The theoretical, clinical, and research role components of care as delivered by the adult/gerontological nurse are explored. Opportunities are provided to individualize the student’s clinical acumen in utilizing diagnostic reasoning, nursing therapeutic, and interdisciplinary approaches. Prerequisites: Consent of instructor. LEC

NRSG 870 Designing a Student Learning Environment (3). The roles of both the educator and student in designing a learning environment provide the framework for analyzing pedagogical philosophies, theories, ethical and legal issues, and research related to teaching strategies and education. The focus is on best practices and research-based strategies to promote various learning styles and create an active learning environment that increases student retention and learning success for diverse multicultural student populations. Attention will be given to the relationship between the setting, methodologies of clinical teaching, and the assessment of competencies. Prerequisites: NRSG 748, NRSG 754, or consent of instructor. LEC

NRSG 871 Curriculum/Program Planning and Evaluation (3). Philosophies, methods, and processes of curriculum and instruction in nursing education provide the framework for understanding curricular and program planning processes. Resources for decision-making, research, and evaluation methods that create a learner-centered environment. Attention is given to frameworks for program evaluation, methods of data collection, and the influence of emerging sociocultural, economic, and political trends and current health professions issues relevant to curriculum planning are addressed. Prerequisites: NRSG 862 Adult/Gerontological Health Care I and NRSG 865 Adult/Gerontological Health Care II. Prerequisite or Corequisite: NRSG 795, Health Care Professionalism: Issues and Trends. Prerequisite: Consent of instructor. LEC

NRSG 870 Designing a Student Learning Environment (3). The roles of both the educator and student in designing a learning environment provide the framework for analyzing pedagogical philosophies, theories, ethical and legal issues, and research related to teaching strategies and education. The focus is on best practices and research-based strategies to promote various learning styles and create an active learning environment that increases student retention and learning success for diverse multicultural student populations. Attention will be given to the relationship between the setting, methodologies of clinical teaching, and the assessment of competencies. Prerequisites: NRSG 748, NRSG 754, or consent of instructor. LEC
NRSG 874 Nurse Educator Preceptorship (3). The role components of the nurse educator are implemented with a preceptor in selected educational settings. Basic attributes are provided to utilize teaching and learning strategies, research findings, and evaluation methods with diverse students. Professional issues, educational trends, changing role of the educator, and self-satisfaction for incorporation in accompanying modules. Prerequisite: NRSG 870, NRSG 871, NRSG 873. Prereq. or Coreq.: Consent of instructor. LEC

NRSG 875 Women’s Health: Adolescence and Young Adult (5). The role of the advanced practice nurse is examined in relationship to environmental and age related factors that result in complex health problems in the young adult female and the childbearing family. Emphasis on theory and research in the maternal and child health areas and the care of the postpartum patient. Community health concepts and research interventions are developed, implemented, and evaluated. Methods for influencing health policy regarding resources for the management of complex health problems in the young adult female and the childbearing family are examined. Prerequisite: Consent of instructor. LEC

NRSG 876 Women’s Health: Middle and Aging Adult (4). The role of the advanced practice nurse in the provision of health care to women and their families during the middle and aging years is implemented. The difference between the management of acute and chronic conditions such as infertility, common gynecological conditions, and osteoporosis are compared as a basis for nursing decisions. Interventions designed to maintain or restore system balance are implemented and evaluated in relation to research. Methods for influencing health policy regarding resources for the management of the health needs of women and their families and her family structure. Prerequisite or Corequisite: NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 877 Foundations in Education and Learning (3). Foundations and applications of education and evaluation strategies for teaching and learning in academic, clinical, administrative, and professional settings are introduced. Sources of knowledge from a variety of sources is used to develop educational processes, products, and evaluation strategies. Students acquire knowledge to support professional development and evaluation of educational programs, such as education of nurses with diverse learners. Prerequisite: NRSG 870 Designing a Student Learning Environment, or Admission to the Doctoral Program, or consent of instructor. LEC

NRSG 878 Clinical Radiology for the Advanced Practice Nurse (2). A complexity science framework is used to present the basic and advanced technical aspects of radiological tests used in the care of adult and pediatric patients in the diagnostic work-up of the etiology of the health problem. The science that forms the basis for all plain (cathode) films as well as computerized scanning and magnetic resonance imaging tests is continued in this unit. The emphasis is placed on the appropriate choice of radiological tests in the work-up of the patient’s health problem. Also, advanced practice nurses will learn a framework for evaluating the findings of the radiological test, and the clinical implications of the findings. Prerequisites: NRSG 886, or NRSG 889, or NRSG 849, or NRSG 840, or consent of instructor. LEC

NRSG 880 Organizational Foundations for Leading Change (5). Leadership concepts are advanced and an orientation to organizational structures and dynamics in health care are introduced. Learners examine linear and non-linear mental models and analyze the social determinants that influence a service organization’s capacity for change. Political, legal, and ethical influences and interventions that reverse constraints and destabilized functions, or advance and strengthen the organizational mission are explored. Prerequisite(s): NRSG 748, Theories for Practice and Research, or Admission to the Certificate in Organizational Leadership Concentration, additional prerequisites are HP&M 821 or PRVM 800. LEC

NRSG 881 Applied Budgeting and Finance (3). Leaders apply basic principles associated with program, project and service line financial management, price-setting, budget preparation, cost-benefit/break-even analysis, managed care contracting, and interpreting financial and non-financial data. Learners develop financial models to communicate with various stakeholders. Financial reports such as balance sheet, budget forms and expense reports are studied and formulated related to government agencies, small clinical operations, grant-funded projects, and start-up programs. Students examine and the staffing-quality equation are analyzed for the purpose of projecting human resource requirements. Prerequisite: NRSG 880, HP&M 814 or consent of instructor. LEC

NRSG 882 Achieving Quality, Safety, and Efficiency (3). This course explores ways to improve health care efficiency, quality, and safety with a focus on micro-systems. The class will examine the current performance of select health care institutions, sources of performance variability (variation theory), methods for measuring performance (measurement theory), and methods for improving performance (change theory). Topics include quality improvement tools, lean improvement concepts, six sigma strategies, and public reporting and accountability. Students will apply performance improvement and risk management techniques to a course project. Same as HP&M 850. Prereq.: NRSG 754, or equivalent consent of instructor. LEC

NRSG 883 Complexity Science Approaches to Improve Organizational Effective (3). This course introduces complexity science principles with the aim of improving the quality and effectiveness of health care organizations. Traditional approaches to quality improvement will be contrasted with tools and metrics that can be applied in complex organizations. Concepts related to systems thinking, diversity, distributed control, co-existence of order and disorder, nonlinearity, inability to predict, emergence, and functioning at the edge of chaos will be introduced. Prerequisites: Consent of instructor or consent of instructor. LEC

NRSG 884 Topics in Organizational Leadership (3). Investigation of current and future issues and trends relevant to organizational leadership. Prerequisite: One graduate course in organizational leadership track or consent of instructor. LEC

NRSG 885 Evaluation and Analysis for Health Care Effectiveness (2). Systematic approaches to evaluate and analyze the impact of specific care delivery systems on impact on client populations, organizational processes, and communities are considered. Research concepts and methods are used in a systems context. Program evaluation, performance improvement, and other methods of measuring outcomes are examined for their utility in the health care setting. Linkages between program evaluation and regulatory policy are studied. Prerequisite: NRSG 754 (or Corequisite): NRSG 880 or consent of instructor. LEC

NRSG 886 Practicum in Organizational Leadership (1-3). The knowledge, skills, and abilities learned throughout the course of study are integrated in this practicum experience designed to build on students’ knowledge and skills in leading change, facilitating advanced communication skills, and demonstrating one or more areas of leadership expertise. Students negotiate a leadership project to be implemented in the workplace and identified by the faculty and preceptor. Core, HP&M 814, Health Care Economics, NRSG 882, Achieving Quality, Safety, and Efficiency. Corequisite: NRSG 891: Managing Human and Organizational Resources, NRSG 898. Research Project in Nursing, or consent of instructor. LEC

NRSG 890 Project in Nursing (1-3). The student will determine, deconstruct, analyze for best practice, and re-constituted for another program. Grant-funded projects are implemented with a preceptor in selected educational settings. Opportunities for students to implement complex project are implemented. Emphasis is placed on experiential knowledge and projects are implemented. Learners examine linear and non-linear mental models and analyze the social determinants that influence a service organization’s capacity for change. Political, legal, and ethical influences and interventions that reverse constraints and destabilized functions, or advance and strengthen the organizational mission are explored. Prerequisite(s): NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 898 Research Project in Nursing (2). Portions of the research process in an area of nursing are implemented. Emphasis is placed on experimental knowledge of the actual conduct of research. Students select one of several research activities and reports on the project. Prerequisite: NRSG 754 plus either one advanced practice or one administration track course, or consent of instructor. LEC

NRSG 899 Thesis (1-6). Prerequisite: NRSG 754, and one core track course. THE Thesis, is a comprehensive report of a study undertaken to develop new knowledge in health care. The student will conduct an investigation, either a descriptive or experimental study, in order to determine the nature and problems of measuring health status and health-related factors in human populations are examined. Specific types of measures and various strategies are discussed and compared at the nominal, ordinal, and interval-ratio levels of measurement, nosocomial infections will be covered. Same as ANAT 689 and HP&M 876. Prereq.: Appropriate research methods and statistics courses in student’s current graduate program (at least 2 statistics courses, one including content of multiple regression); and permission of the instructor. For students in the Outcomes Management and Research program or permission of instructor. LEC

NRSG 901 Research Writing (3). This course is a practical guide to research writing: a guide to the student’s experiences throughout the program interact to build on the integrative content from the other outcomes certificate courses. During seminars the students discuss and analyze presentations and publications reporting studies and projects undertaken to describe, evaluate, and synthesize clinical, financial, and quality-of-life outcomes of medical health care interventions. (Same as HP&M 876 and PRVM 868.) Prerequisite: Admission to the Certificate in Outcomes Management and Research program or permission of instructor. LEC

NRSG 904 Topics in Organizational Leadership (3). Leadership concepts are advanced and an orientation to organizational structures and dynamics in health care are introduced. Learners examine linear and non-linear mental models and analyze the social determinants that influence a service organization’s capacity for change. Political, legal, and ethical influences and interventions that reverse constraints and destabilized functions, or advance and strengthen the organizational mission are explored. Prerequisite(s): NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 910 Independent Study in Nursing (1-5). Intensive study in an area of interest with experiences selected according to the student’s written purposes, conceptual framework, objectives and evaluation (1-5 credit hours). Prerequisite, courses, as determined by the Independent Study Proposal. Students will develop and financial text. In addition, different fund- ing agencies, building research teams, the review process, responding to reviewers, and management as a health care employer of choice. PREREQUISITE: All Leadership Core Courses or consent of instructor. Course is crosslisted with HP&M 854. LEC

NRSG 912 Research Project in Nursing (2). Portions of the research process in an area of nursing are implemented. Emphasis is placed on experimental knowledge of the actual conduct of research. Students select one of several research activities and reports on the project. Prerequisite: NRSG 754 plus either one advanced practice or one administration track course, or consent of instructor. LEC

NRSG 913 Professional and Scholarship Workshop (1). Building a foundation for advanced study is explored in the context of professionalism and scholarship.
Strategies for promoting professional development while preparing for future roles as nurse leaders and nurse scientists are examined. Students are required to participate in a capstone experience as an assignment in the Doctoral Program. LEC

NRSG 938 Informatics and Technology Applications (2). The field of nursing informatics and the role of the nurse to support research and evidence-based practice inquiry in a variety of organizational settings is introduced. The current state of the science in naming nursing phenomena and how these phenomena are represented in information systems is explored. The use of technology as an adjunct to doctoral-level inquiry and how it supports clinical and professional decision-making is explained and demonstrated. Corequisite: NRSG 935 or consent of instructor. LEC

NRSG 940 Knowledge and Theory Development in Nursing Science (3). The philosophical, ethical, social-cultural, economic, and political forces that shaped the historical course of nursing science are examined. Philosophical and scientific foundations of knowledge development in nursing science are explored. Conceptual and grand theoretical development and analysis strategies are practiced. Integration of theory, research, and practice knowledge development in nursing science is emphasized. Prerequisite: NRSG 938 or consent of instructor. LEC

NRSG 941 Preparing for Doctoral Leadership (3). Skills in leading, managing, and following as the doctoral graduate assumes critical roles within academia, the health care system, or other business entities are developed and strengthened. Through developmental exercises, theoretical and practical explorations of organizational structures and settings and career trajectory planning, the student is poised to optimize the doctoral experience to influence social change. Prerequisite: NRSG 938 or consent of instructor. LEC

NRSG 942 Theory Application in Nursing Science (3). The development of middle-range theoretical structures and processes in nursing science is examined. Historical foundations of middle-range theory are traced to current trends and future possibilities in theory development, application, testing, and evaluation. Examples from nursing science and related health and social sciences are used to illustrate middle-range theory development, application, testing, and evaluation. Strategies for using existing theoretical knowledge to guide practice in diverse settings and to foster ongoing development of new knowledge are explored. Prerequisite: NRSG 940 or consent of instructor. LEC

NRSG 943 Methods for Quantitative Research (3). Quantitative research methods are studied as they relate to investigation of phenomena in nursing and health care. Focus is on understanding the issues involved in generating research questions and hypotheses, designing and implementing studies to answer specific questions or test hypotheses, the logic and application of statistical inference, and the strengths and weaknesses of different approaches to quantitative methods. Prerequisite: Corequisite: NRSG 946; PRE 905; or consent of instructor. LEC

NRSG 944 Quantitative Research Application (2). This Practicum provides a research application experience in quantitative methods. Under the direction of a faculty mentor, students identify a research question/hypothesis that may be analyzed using existing data, plan and execute appropriate analyses to answer the question or test the hypothesis, and write a formal report including a description of what was done, why it was done, and an interpretation of the findings. Prerequisites: NRSG 943, or consent of instructor. LEC

NRSG 945 Synthesis Workshop I (1). Leadership development and technologic applications are integrated with theoretical, statistical, and research methods. Doctoral leadership skills are refined and tested through case study simulations of theory and research applications in technologic settings. A qualifying examination concludes the Workshop consisting of a written and oral case study simulation. Prerequisite: NRSG 941, NRSG 942, NRSG 946, PRE 905 or consent of instructor. Prerequisite/Corequisite: NRSG 877, LEC

NRSG 946 Measurement Principles and Practice (3). Classical measurement theory and related academic course requirements are covered in this course. Various approaches to instrumentation are examined. Students use existing data to evaluate selected measures, with emphasis on reliability and validity. They also critically analyze published reports of instrumentation for research. Basic knowledge of concept analysis is expected prior to enrollment. Prerequisite: NRSG 940 or consent of instructor. LEC

NRSG 947 Qualitative Research Application (3). Students conduct fieldwork to implement a qualitative research proposal. Emphasis is placed on advanced application of various qualitative methods. Extended experience in qualitative data collection and analysis is provided. Prerequisite: NRSG 902, NRSG 940 or consent of instructor. LEC

NRSG 948 Advancing Organizational and Clinical Quality (2). The roles of nursing leaders in the design, measurement, and evaluation of the discipline within a variety of organizational settings are analyzed. The nuances of measurement and statistics are compared and related to the quality science paradigm, applying incremental measurement techniques to foster continuous improvement. Process design, standards development and adaptation, regulatory requirements, and consumer expectations for quality are integrated into a quality plan that aligns with the student’s career trajectory. Prerequisite: NRSG 944, NRSG 947 or consent of instructor. LEC

NRSG 949 Synthesis Workshop II (1). Content from the full range of doctoral courses including theory, research, statistics, and professional development is integrated and synthesized. Strategies for using these content areas to meet program objectives and students’ professional objectives are explored. A qualifying examination, consisting of a written and oral case study simulation, concludes the Workshop. Prerequisite: Completion of all or previous core course work. May be corequisite w/ NRSG 948, or consent of instructor. LEC

NRSG 959 Research Experience (2). This practicum is an intensive research experience with a specific faculty mentor. It involves working on part of the faculty mentor’s current research or on a subject closely related to the mentor’s work. The student submits a proposal for this research experience to the faculty mentor. Once the project is complete, the student presents the research orally in a structured forum and, if approved, to a national or regional audience. Prerequisite: Consent of instructor. LEC

NRSG 964 Advanced Clinical Residency (1-9). The advanced clinical residency is designed to expand the D.N.P. student’s breadth and/or depth of clinical knowledge and skills in an area of practice. The focus can be either on the delivery of care or on the advancement of knowledge and skill in a chosen area. This course allows students to develop clinical expertise and provide service in a selected specialty area. Students will synthesize clinical knowledge and use evidence-based decision making to construct clinical care plans that address theoretical, scientific, and evidence-based independent therapeutic interventions, and outcome evaluation of the care of clients. Prerequisite/Co-requisite(s): Post-B.S.N. students: NRSG 818, or NRSG 868, or NRSG 869, or NRSG 949, or NRSG 940, or consent of instructor. Post master’s students: A minimum of 600 clinical hours in your current or previous work following graduation form an accredited Master’s in Nursing program; National certification in your area of expertise (e.g. family, adult, psych, pediatric, CNM, etc.) CLN

NRSG 965 Special Topics: (1-2). Students participate in advanced study that provides theoretical, methodological, and clinical perspectives to facilitate their pursuit of research interests in an identified specialty area. Methods include directed readings, discussions, and the interpretation of data-based literature. Examples of topics are theory and research issues related to health systems, symptom management, or health behavior; topic for any given semester to be announced. Prerequisite: Consent of instructor. IND

NRSG 980 Doctorate of Nursing Practice Capstone Project (1-6). The capstone project is an amalgamation of a student’s field of expertise in nursing. Students will conduct a course of study. As such, the capstone requires that a practice-focused problem be identified and examined in depth. For most students the capstone project will include application of an evidence-based intervention suitable to their area of focus and a topic that involves the appropriate metric (or sets of metrics) evaluation, and dissemination of the project findings to a targeted audience. The capstone project must meet capstone guidelines for the D.N.P. program. Prerequisite: NRSG 754, graduate level statistics course, consent of instructor. Corequisite: OTMS 635 LID

NRSG 990 Doctoral Research (1-12). Original and independent investigation approved by and conducted under the supervision of the student’s adviser or advisory committee and in partial fulfillment of the requirements for the Ph.D. degree. Prerequisite: NRSG 959 and consent of adviser. IND

NRSG 997 Independent Study (1-4). Having chosen an appropriate mentor, the student selects an area of advanced study. Specific objectives and credit hours are jointly determined by the student and selected faculty member. Prerequisite: Prior graduate course work in the area of study and consent of instructor. IND

NRSG 999 Dissertation (1-12). Preparation of the dissertation based upon original research and in partial fulfillment of the requirements for the Ph.D. degree. Credit is given only after the dissertation proposal has been accepted by the student’s dissertation committee. Prerequisite or Corequisite: NRSG 990 and consent of adviser. THE
See pages 12-13 for admission procedures.

Application fees: Domestic students in pharmacy: paper $55, online $45.
International students in pharmacy: paper $60, online $55.

KU is a member of the American Association of Colleges of Pharmacy and is accredited by the American Council on Pharmaceutical Education.
The Department of Pharmacy Practice offers the M.S. with a major in hospital pharmacy. The other three departments offer both the M.S. and the Ph.D. with majors in their respective disciplines. Requirements for admission and baccalaureate preparation vary with each department and are discussed separately.

Address inquiries and correspondence about graduate studies to the program or department of interest.

See Admission in the General Information chapter of this catalog for information about application fees.

Hospital Pharmacy

Interim Chair and Graduate Adviser: Dennis W. Grauer
Malott Hall, 1251 Wescoe Hall Dr., Room 6050
Lawrence, KS 66045-7572 or
KU Medical Center, Mail Stop 4040
3910 Rainbow Blvd., Kansas City, KS 66160, (913) 588-5360
http://pharmpractice.ku.edu, (785) 864-4881

Professors: Godwin, Howard
Clinical Professor: Generali
Associate Professors: Barnes, Grauer, Henry
Clinical Associate Professors: Backes, Moeller, Ruisinger
Clinical Assistant Professors: Davidow, Emerson, Eng, Jenkins, Kleoppel, Ragan, Woods, Yang

Admission

In addition to meeting the general requirements for admission to graduate studies, applicants are considered for admission if they are graduates of a school of pharmacy accredited by the American Council on Pharmaceutical Education and are eligible for licensure as registered pharmacists by the Kansas State Board of Pharmacy. A Bachelor of Science degree or a Doctor of Pharmacy (Pharm.D.) degree with a major in pharmacy is required.

Submit your application online at www.graduate.ku.edu. Send transcripts of all completed college and university course work and all other requested application materials to

The University of Kansas
Department of Pharmacy Practice
Malott Hall, 1251 Wescoe Hall Dr., Room 6050
Lawrence, KS 66045-7572

M.S. Degree Requirements

A minimum of 30 credit hours, with a majority of hours in pharmacy, is required for the degree. These courses may be selected from related fields after approval by the department. Examples are hospital pharmacy, clinical pharmacy, nuclear pharmacy, computer science, business administration, health policy and management, and related fields. An approved project, representing 6 to 9 credit hours of original research, is required. It may be in pharmaceutical sciences, clinical pharmacy, pharmacy practice, pharmacotherapy, or hospital pharmacy.

To provide practical experience, an accredited specialty residency in pharmacy practice management in an approved hospital is required of each student. Requirements for the residency program include eligibility for licensure as a pharmacist in Kansas. The student must complete the residency concurrently with the academic portion of the program. Upon satisfactory completion of the residency, the student receives a certificate of residency from the cooperating hospital. The typical length of the program is two years. For students who have previously completed a residency accredited by the American Society of Health-System Pharmacists, this part of the program may be waived on approval of the department.

Facilities

Facilities of the pharmacy department at the University of Kansas Medical Center in Kansas City are used in the residency portion of the program.

Pharmacy Practice Courses

PHPR 500 Medical Terminology Elective (1).
PHPR 501 Health Care Systems (3).
PHPR 502 Pharmacy Practice I Pharmaceutical Care Fundamentals (4).
PHPR 503 Pharmacy Practice II Pharmaceutical Care Fundamentals (4).
PHPR 504 Pharmacy Law (1).
PHPR 505 Ethics and Introduction to Law (1).
PHPR 506 Pharmacy Practice III Pharmaceutical Care Fundamentals (4).
PHPR 507 Pharmacy Practice IV Pharmaceutical Care Fundamentals (4).
PHPR 508 Oncology Elective (1).
PHPR 510 Medical Terminology Elective (1).
PHPR 511 Service-Learning Elective (1).
PHPR 512 Careers in Pharmacy Elective (1).
PHPR 513 Chemical Dependency Elective (1).
PHPR 514 Communication and Counseling (1).
PHPR 515 Pharmacy and the Arts (1).
PHPR 520 Pharmacoeconomics and Outcomes (3).
PHPR 521 Pharmacy Law (2).
PHPR 522 Drug Information and Biostatistics (3).
PHPR 525 Pharmacotherapy I (3).
PHPR 526 Pharmacotherapy II (3).
PHPR 527 Pharmacotherapy III (3).
PHPR 528 Pharmacotherapy IV (3).
PHPR 529 Drug Information/Biostatistics and Med Lit Evaluation (4).
PHPR 530 Drug Information/Biostatistics and Med Lit Evaluation (4).
PHPR 531 General Clinical Clerkship (4).
PHPR 532 Compounding Clerkship (4).
PHPR 533 Ambulatory Community Practice Clerkship (4).
PHPR 534 Surgical ICU Clerkship (4).
PHPR 535 Problems in Pharmacy Practice (1-5).
PHPR 536 Law/Ethics (3).
PHPR 537 NTPD Rounding Clerkship I (4).
PHPR 538 NTPD Clerkship II (4).
PHPR 539 NTPD Clerkship III (4).
PHPR 540 NTPD Clerkship IV (4).
PHPR 541 NTPD Clerkship V (4).
PHPR 542 Medical ICU Clerkship (4).
PHPR 543 Nutrition Support Advanced Clerkship (4).
PHPR 546 Pharmacotherapy I (4).
PHPR 547 Pharmacotherapy II (4).

KU’s School of Pharmacy ranked third among the nation’s elite programs in fiscal year 2008 for securing funding from the National Institutes of Health. The school received more than $17.6 million in NIH funding.

The School of Pharmacy has been in the top five for NIH funding for eight consecutive years and in the top 10 since 1995.
PHPR 648 Pharmacotherapy III (4).
PHPR 649 Drug Information (3).
PHPR 650 Family Practice Advanced Clerkship (4).
PHPR 651 Biostatistics (3).
PHPR 652 Drug Information Advanced Clerkship (4).
PHPR 653 Home Health Care Advanced Clerkship (4).
PHPR 654 Neonatal Advanced Clerkship (4).
PHPR 655 Pediatrics Hematology, Oncology Advanced Clerkship (4).
PHPR 656 Internal Medicine Advanced Clerkship (4).
PHPR 657 Poison Control Center Advanced Clerkship (4).
PHPR 658 Infectious Disease Advanced Clerkship (4).
PHPR 659 Medication Safety/Reconciliation (4).
PHPR 660 Cardiology Advanced Clerkship (4).
PHPR 661 General Pediatrics Advanced Clerkship (4).
PHPR 662 Research Laboratory Rotation (4).
PHPR 663 Critical Care Advanced Clerkship (4).
PHPR 664 Geriatrics Advanced Clerkship (4).
PHPR 665 Advanced Specialized Clerkship I (4).
PHPR 667 Advanced Specialized Clerkship II (4).
PHPR 668 OB-GYN Advanced Clerkship (4).
PHPR 669 Oncology Advanced Clerkship (4).
PHPR 670 Physical Assessment (1).
PHPR 671 Nuclear Pharmacy Advanced Clerkship (4).
PHPR 672 Managed Care Clerkship (4).
PHPR 673 Formulary Management/DUE (4).
PHPR 674 Ambulatory Care Advanced Clerkship I (4).
PHPR 675 Operating Room Clerkship (4).
PHPR 676 Clinical Clerkship (4).
PHPR 677 Ambulatory Care Advanced Clerkship II (4).
PHPR 678 Pharmaceutical Industry Clerkship (4).
PHPR 679 Pharmacy Association Clerkship (4).
PHPR 680 Advanced Specialized Externship I (4).
PHPR 681 Pulmonary/Critical Care Advanced Clerkship (4).
PHPR 682 Public Health Service Clerkship (4).
PHPR 683 Hematology Advanced Clerkship (4).
PHPR 684 Neurology Advanced Clerkship (4).
PHPR 685 Hospital Pharmacy Administration (4).
PHPR 686 Hospital Externship I (4).
PHPR 687 Hospital Externship II (4).
PHPR 688 Long-Term Care Advanced Clerkship (4).
PHPR 689 Pediatric Critical Care Advanced Clerkship (4).
PHPR 690 Clinical Drug Research (4).
PHPR 691 Diabetes Advanced Clerkship (4).
PHPR 692 Veterinary Medicine Clerkship (4).
PHPR 693 Psychopharmacy Advanced Clerkship (4).
PHPR 694 Drug Utilization Review Clerkship (4).
PHPR 695 Investigational Drugs Clerkship (4).
PHPR 696 Community Externship I (4).
PHPR 697 Community Externship II (4).
PHPR 699 Seminar (1).
PHPR 845 Professional Communications (2). A course designed to give the graduate student a practical experience in areas of professional communications such as administrative proposals, grants, letters, memos, poster presentations, and written papers. The course focuses on the different kinds of communications required to relate to other health care professionals. Prerequisite: Consent of instructor. LEC
PHPR 855 Economic Evaluation of Health Care Programs and Services (3). The course will provide students with an overview and appraisal of the state of the art in the evaluation of health care programs and services. The course will include an emphasis on the planning, justification, implementation, management, and coordination of a progressive, comprehensive institutional pharmacy service. Seminar presentations and case studies are used to analyze recent advances and to apply data from the research literature. Prerequisite: Consent of instructor. LEC
PHPR 875 Health Care Delivery Systems (3). A continuation of PHPR 865 dealing with the current status of health care delivery systems and the impact of changes in this area on pharmacy practice. Prerequisite: PHPR 865 and consent of instructor. LEC
PHPR 885 Human Resource Management in Institutional Pharmacy Practice (3). A course dealing with recruitment, training, motivation, monitoring of performance, and disciplining of personnel. Seminars, case studies, and role playing are used to apply the information to specific human resource management situations in institutional pharmacy practice. Prerequisite: PHPR 865 and consent of instructor. LEC
PHPR 899 Research in Pharmacy Practice (1-6). Original investigation in the area of pharmacy practice. Prerequisite: Consent of instructor. I SH

Medicinal Chemistry

Chair: Barbara Timmermann, medchem@ku.edu
Graduate Adviser: Apurba Dutta, adutta@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7572, www.medchem.ku.edu, (785) 864-4495
Professors: Aldrich, Aubé, Grunewald, Hanzlik, Mitscher, Peterson, Timmermann
Courtsey Professors: Hanson, Lushington, Schoenen, Tunge, Williams
Adjunct Professors: Anderson, Djuric, Flynn, Georg, Lattin, Rafferty, Schönbunn
Associate Professors: Blagg, David, Dutta, Prisinzano
Assistant Professor: Scott
Medicinal chemistry is an interdisciplinary field at the interface of chemistry and biology. It approaches important biological and health-related problems through application of fundamental principles of organic chemistry, biochemistry, natural product chemistry, and molecular pharmacology. Graduates are expected to be thoroughly familiar with the chemistry of organic compounds, including their synthesis and biosynthesis, their reactivity, and their interactions with and alteration by living systems. Research is at the heart of the program, and the department’s research activities encompass many areas of modern medicinal chemistry. Graduate students may choose the organic chemistry track or the biochemistry track.

Currently, the department has 12 full-time faculty members, about 45 graduate students, more than 30 postdoctoral associates, numerous undergraduate researchers, and an outstanding technical staff. The department is recognized nationally and internationally, and most graduates have gone on to successful careers in the pharmaceutical industry and in academia. Medicinal chemistry faculty members are directors of two Centers for Biomedical Research Excellence (COBRE) — the Center for Cancer Experimental Therapeutics and the Center in Protein Structure and Function — as well as the Center for Chemical Methodologies and Library Development (CMLD) and the Specialized Chemistry Center (SCC), all funded by the National Institutes of Health.

Admission

Graduate students are primarily admitted to the department to pursue the Ph.D. degree. The M.S. degree and postdoctoral training are also available. An applicant wishing to enter the graduate program must have earned a bachelor’s or master’s degree in pharmacy, medicinal chemistry, chemistry, biochemistry, or a closely related field, and must have completed one year of organic chemistry with laboratory (equivalent to CHEM 624, CHEM 625, CHEM 626, and CHEM 627). In all cases, general admission requirements must be met.

Applications are evaluated by the graduate selection committee. Applications must be supported by one copy of official transcripts of all previous college and university work, both undergraduate and graduate. In addition, three letters of recommendation from current or former teachers, advisers, or employers must be submitted. Students from non-English-speaking countries also must furnish proof of proficiency in English. Graduate Record
Examination general test scores are required, and applicants are strongly encouraged to take the subject test in chemistry as well. The graduate selection committee makes admission decisions based on grade-point averages for previous college work (particularly in the relevant science areas), letters of recommendation, previous research or employment experience relevant to the graduate training being sought, GRE scores, etc. The number of applicants who can be admitted at any time varies, depending on the availability of laboratory space, research facilities, and financial support for research activities, but it is usually about 10 a year.

Applications can be submitted online at www.graduate.ku.edu. All other requested application materials (transcripts, résumé, statement of purpose, recommendation letters, etc.) should be sent directly to the following address:

The University of Kansas
Department of Medicinal Chemistry
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7572

M.S. Degree Requirements

Candidates for this degree must satisfy general requirements as well as those of one of the following options:

Students who are proceeding toward the Ph.D. degree at KU receive the master’s degree after satisfactorily completing the course work requirement for the Ph.D. and passing a comprehensive examination.

Students who wish to earn only the M.S. degree must complete a prescribed subset of the course work requirements for the Ph.D. degree and a thesis representing at least 10 credit hours of research and pass a thesis defense.

Ph.D. Degree Requirements

If credit has not already been obtained in the courses below or their equivalents, students must complete the following courses as early as is practical in the graduate program: one semester of physical chemistry (CHEM 640 or CHEM 646), and biochemistry (MDCM 701). Satisfactory completion of qualifying examinations in organic chemistry and biochemistry also is required.

A series of monthly written cumulative examinations is used to assess students’ knowledge of medicinal chemistry, organic chemistry, and biochemistry. These examinations must be passed at an accelerating rate during the second and third years. After completing the cumulative examinations, the major part of the course work, and other requirements, the student takes an oral comprehensive examination. After completing this examination, the student prepares an original research proposal for presentation to the faculty. The final requirement for the Ph.D. is the preparation and defense of a dissertation based on original laboratory research conducted by the candidate.

General requirements, such as those related to the comprehensive oral examination, the dissertation, and the dissertation defense, are listed in the General Information chapter of this catalog.

Facilities

The department is well equipped for both chemical and biochemical research and has research facilities for about 70 graduate students, postdoctoral associates, and research technicians. Malott Hall, where most of the medicinal chemistry laboratories are located, also houses the Departments of Chemistry and Pharmacology and Toxicology; Anschutz Library is adjacent to the building. Much of the laboratory space in the department has recently undergone renovation and provides exceptional research laboratories for chemical synthesis and biochemical research. The department has an excellent complement of modern spectroscopic, biochemical, and chromatographic instrumentation, and other specialized research instrumentation is available through cooperative arrangements with other departments.

Advanced instrumentation and facilities are available through KU’s Molecular Structures Group (www.msg.ku.edu). MSG laboratories include the Biochemical Research Service Laboratory, the Mass Spectrometry Laboratory, the Nuclear Magnetic Resonance Laboratory, the Molecular Graphics and Modeling Laboratory, the X-ray Crystallography Laboratory, and the Protein Structure Laboratory (dedicated to macromolecular X-ray crystallography) with more than $10 million in instrumentation. The Structural Biology Center, on KU’s west campus, offers new research opportunities for medicinal chemists interested in protein and nucleic acid structure and combinatorial synthesis; it also houses the new 800-MHz NMR. The Analytical Proteomics Laboratory, which combines activities of the Mass Spectrometry Lab and BRSL to create a collaborative environment for protein handling, protein mass spectrometry, and bioinformatics, is in the Structural Biology Center. In the same building, the High Throughput Screening Laboratory has integrated and automated robotics equipment for carrying out biochemical and cell-based assays and a chemical library of more than 100,000 compounds with diverse structures and drug-like properties for biological screening. The service laboratories have professional staff that provides training in specialized research techniques in addition to their service functions.

Medicinal Chemistry Courses

MDCM 601 Medicinal Biochemistry I (4).
MDCM 602 Medicinal Biochemistry Laboratory (1).
MDCM 603 Medicinal Biochemistry II (3).
MDCM 606 Phytomedicinal Agents (1).
MDCM 607 Clinical Pharmacognosy (1).
MDCM 625 Medicinal Chemistry I: Neuroeffector Agents (3).
MDCM 626 Medicinal Chemistry II: Homeostatic Agents (3).
MDCM 627 Medicinal Chemistry III: Chemotherapeutic Agents (3).
MDCM 675 Introduction to Drug Design and Development (2-3).
MDCM 690 Undergraduate Research (1-5).
MDCM 691 Research Techniques in Medicinal Chemistry (1).
MDCM 692 Problems in Medicinal Chemistry (1-5).
MDCM 701 Biomedical Chemistry (3). A study of the principles of macromolecular structure and function, biosignaling, bioenergetics and metabolism, with an emphasis on the relationship between biochemistry and medicine. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 703 Advanced Biomedical Chemistry (3). A study of the principles of basic enzymology, including chemical reactions, biosynthesis, and metabolism. In addition, the course will cover amino acids, vitamins, and minerals. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 710 Physiological Aspects of Medicinal Chemistry (1). The goal of this one-credit-hour course is to provide an overview of physiological mechanisms and disease processes as a background for intermediate level courses in medicinal chemistry, drug discovery and drug development. Prerequisite: One college-level course in biology. LEC
MDCM 721 Introduction to Medicinal Chemistry (1). An overview of the field of medicinal chemistry, including discussions of research techniques and the application of organic chemistry to medicinal chemistry problems. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 722 Principles of Organic Medicinal Chemistry (3). The discovery and properties of pharmaceutical agents, including a survey of the various drug classes important in clinical applications. The relationship between chemical structure and biological mechanism of action will be emphasized. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 742 Experimental Pharmacology (4). Experimental approaches to understanding mechanism of drug action. Use of drugs as tools to understand functioning of biological systems will also be stressed. Historically important experiments will be discussed along with experiments which are currently used to define drug mechanisms. Topics will include: dose-response, drug receptors, drug metabolism, chemotherapy as well as autonomic and CNS, cardiovascular and renal pharmacology. (Same as P&TX 742.) Prerequisite: BIOL 600 and BIOL 646 or equivalent, or consent of instructor. LEC
MDCM 775 Chemistry of the Nervous System (5). A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as BIOL 775, CHEM 775, NURO 775, PETX 775, and PHCH 775.) Prerequisite: Consent of instructor. LEC
MDCM 777 Advanced Laboratory Techniques in Medicinal Chemistry (2). A laboratory course designed to acquaint advanced undergraduate and beginning graduate...
students with laboratory safety, the research notebook, use of advanced instrumental techniques for structural assignment and verification, methods of separation and purification, and the use of advanced reagents and laboratory transformations relevant to research in medicinal chemistry. Prerequisite: Consent of instructor. LAB

MDCM 785 Natural Products of Medicinal Significance (2). A discussion of biosynthetic-directed screening, the isolation, structure determination, biosynthesis, partial synthesis and total chemical synthesis of organic natural products of medicinal significance. Examples of the classes of compounds to be considered include steroid hormones, cardiac glycosides, alkaloids, antibiotics, terpenes, and the like. Prerequisite: Graduate standing or consent of instructor. LEC

MDCM 790 Principles of Drug Design (3). A discussion of the principles of contemporary drug design with specific examples chosen from the original literature. Prodrugs; biossioxesters; Keat inhibitors; active site directed reversible and irreversible inhibitors; quantitative SAR; modulation of drug absorption, distribution, metabolism and excretion; passive vs. active processes; pharmacokinetics; bioactivation vs. detoxification; and applications in drug design and improvement. Prerequisite: Graduate standing or completion of MDCM 624 and MDCM 627. LEC

MDCM 791 Principles of Drug Disposition (1). An introduction to the chemical and biochemical principles which govern the interaction of drugs and chemicals with cells and organisms. Topics include absorption, distribution, metabolism, and excretion; passive vs. active processes; pharmacokinetics; bioactivation vs. detoxification; and applications in drug design and improvement. Prerequisite: One year of organic chemistry and one course in biochemistry. LEC

MDCM 799 Seminar in Medicinal Chemistry (1). Reports by research students and discussions of developments in the field not covered in formal courses. LEC

MDCM 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career with emphasis in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, the scientist as author, grantees, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MDCM 801, NURO 801, P&TX 801, PHCH 801 and PHCH 802.) LEC

MDCM 804 Interdisciplinary Seminar on Ethics in Science and Engineering (1-3). The course will cover basic techniques of moral reasoning, especially as applied to ethical issues in the physical sciences and engineering. Topics covered will include the ethical conduct of research, the federal and professional guidelines for different kinds of research, and the ethical dimensions of publication and professional life. Emphasis will be on practical applications, cases and student involvement. (Same as GS 804, NURO 804, P&TX 804, and PHCH 804.) Prerequisite: Must be admitted to the program or division of Pharmacy to enroll in this class. LEC

MDCM 860 Drug Metabolism (2). An in-depth examination of the pathways, enzymes, and mechanisms of xenobiotic biotransformation in a combined lecture-readings-discussion format. Emphasis will be on recent as well as classic methods of findings. Prerequisite: MDCM 790 or MDCM 791 or consent of instructor. LEC

MDCM 861 Drug Metabolism Laboratory (1-3). A laboratory course exemplifying various techniques used in studying the metabolism of foreign organic compounds in mammalian systems. In addition, enzymatic reactions in other plant and microbial systems are studied. Prerequisite: Consent of instructor. LAB

MDCM 895 Research in Medicinal Chemistry (1-12). Hours and credit to be arranged. RSH

MDCM 899 Master’s Thesis (1-12). Hours and credit to be arranged. Independent investigation of a research problem of limited scope. Prerequisite: Consent of instructor. THE

MDCM 950 Advanced Topics (1-3). An in-depth discussion of topics of current interest to medicinal chemists. Prerequisite: Consent of instructor. LEC

MDCM 952 Introduction to Molecular Modeling (3). Theory and practice of contemporary molecular modeling: real-time computer graphics, model-building routines, use of structural databases, molecular mechanics and molecular dynamics calculations. The laboratory section places emphasis on drug design; work on own problems is welcome. (Same as BIOL 952.) Prerequisite: Consent of instructor or consent of instructor. LAB

MDCM 980 Original Research Proposal (1). Preparation of an original research proposal concerning contemporary problems in medicinal chemistry. Prerequisite: Consent of instructor. LAB

MDCM 990 Postdoctoral Research in Medicinal Chemistry (1-12). Advanced level research in collaboration with a faculty member, which may involve projects in one or more of the following areas: organic synthesis, isolation and structure elucidation, metabolism, biochemical mechanisms of drug action. Prerequisite: Doctoral degree or equivalent in an appropriate related area, and consent of instructor. RSH

MDCM 999 Doctoral Dissertation (1-12). Hours and credit to be arranged. Original chemical research in the synthesis and development of medicinal agents, elucidation of the chemical mechanisms of drug action, drug metabolism, and drug toxicities. THE

Neurosciences

Co-director: Elias K. Michaelis, emichaelis@ku.edu
2099 Constant Avenue, Lawrence, KS 66047-3729,
(785) 864-4504 or (785) 864-7339

Co-director: Paul D. Cheney, pcheney@kumc.edu
KU Medical Center, 3011 Wahl Hall East (A), Mail Stop 3043
3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7400

Participating Faculty Members: Brian Ackley (Molecular Biosciences), Aldrich (Medicinal Chemistry), P. Atchley (Psychology), R. Atchley (Psychology), Auer (Speech-Language-Hearing: Sciences and Disorders), Barlow (Speech-Language-Hearing: Sciences and Disorders), Belousov (Molecular and Integrative Physiology), Berman (Anatomy and Cell Biology), Brooks (Hoglund Brain Imaging Center), Bruns (Anatomy and Cell Biology), Burns (General Clinical Research Center, Alzheimer’s and Memory Center), Carrasco (Pharmacology and Toxicology), Cheney (Molecular and Integrative Physiology), Chertoff (Hearing and Speech), Choi (Hoglund Brain Imaging Center), Colombo (Psychology), Dobrowolsky (Pharmacology and Toxicology), Durham (Otolaryngology), Enna (Pharmacology, Toxicology, and Therapeutics), Festoff (Neurology and Pharmacology, Toxicology, and Therapeutics), Fiorentino (Linguistics), Fowler (Pharmacology and Toxicology), Frost (Landon Center on Aging), Gamblin (Molecular Biosciences), Ilardi (Psychology), Imig (Molecular and Integrative Physiology), Johnson, D. (Psychology), Johnson, M. (Chemistry), Kelly (Molecular Biosciences), Klein (School of Medicine, Faculty Development, Anatomy and Cell Biology), Krumlauf (Anatomy and Cell Biology, Biochemistry and Molecular Biology), Lee (Hoglund Brain Imaging Center), Levant (Pharmacology, Toxicology, and Therapeutics), LeVine (Molecular and Integrative Physiology), Lundquist (Molecular Biosciences), Lunte (Pharmaceutical Chemistry), Lyons (Parkinson’s Disease and Movement Disorder Center), McCarson (Pharmacology, Toxicology, and Therapeutics), E. Michaelis (Pharmacology and Toxicology), M. Michaelis (Pharmacology and Toxicology), Moskovitz (Pharmacology and Toxicology), Muma (Pharmacology and Toxicology), Nishimune (Anatomy and Cell Biology), Nudo (Molecular and Integrative Physiology), Orr (Molecular Biosciences), Priszinzano (Medicinal Chemistry), Radel (Occupational Therapy), Rice (Speech-Language-Hearing: Sciences and Disorders), Shi (Pharmacology and Toxicology), Smith (Molecular and Integrative Physiology), Stanford (Molecular and Integrative Physiology), Steinmetz (Psychology and Molecular Biosciences), Swerdlow (Neurology, Alzheimer’s Memory Program), Trainor (Anatomy and Cell Biology), Werle (Anatomy and Cell Biology), Wright (Anatomy and Cell Biology)

The neurosciences program admits students directly for study on the Lawrence campus, with strengths in all the biomedical and clinical sciences. Each student is asked which campus he or she would prefer. Students earn a Ph.D. degree in the neurosciences. In exceptional circumstances, the program also offers an M.S. degree in neurosciences.

The KU School of Pharmacy, established in 1885, was the third state university school of pharmacy in the U.S. and is the only pharmacy school in Kansas.
Graduates can pursue careers in university teaching and research or conduct and supervise research in a pharmaceutical/biotechnology company or government laboratory.

**Programs**

Neuroscience is a truly multidisciplinary research field. All students are expected to be able to understand the fundamental principles and contributions of each of the major disciplines of the neurosciences core. New students receive training in biochemistry and molecular biology, cell biology, and physiology before proceeding with more focused courses.

**Admission**

All application materials are reviewed by faculty committees in Lawrence and Kansas City. Students should have B.A. or B.S. degrees in anthropology, behavioral sciences, biology, chemistry, engineering, neuroscience, or pharmacological sciences. Preference is given to students who have completed courses in introductory and organic chemistry, calculus, physics, introductory biology, and at least one course in advanced biology topics such as biochemistry, physiology, microbiology, or molecular biology. Students who do not have sufficient training complete appropriate courses before admission. The program requires standard Graduate Record Examination scores with all applications, three letters of recommendation, and an essay by the applicant about his or her career goals. Selection is based on grade-point average, GRE scores, letters of recommendation, and evidence of previous experience in research. The minimum standard is a grade-point average of 3.0 on a 4.0 scale.

Submit your application online at www.graduate.ku.edu. Forward all requested supporting application documents to

**The University of Kansas**  
**Neuroscience Graduate Program, Malott Hall**  
1251 Wescoe Hall Drive, Room 5064  
Lawrence, KS 66045-7572

**M.S. Degree Requirements**

The M.S. is offered in rare cases where attainment of the Ph.D. is inappropriate. A student may earn the M.S. by completing these minimum requirements:

- The courses in the curriculum of the first year of the Ph.D. training program.
- The course in advanced neuroscience.
- A thesis based on either original research or library research.
- The total credit hours of graduate-level courses required for the M.S. degree.

**Ph.D. Degree Requirements**

The neuroscience curriculum is subdivided into core courses that all students must complete and electives representing the two major specializations, Cell and Molecular Neuroscience and Cognitive and Systems Neuroscience. The core curriculum includes research rotations in two laboratories of the student’s choice during the first year. Laboratory rotations offer first-hand research experience. Students complete two rotations in faculty research laboratories in the first year. Laboratories are selected by the student and the co-directors. After the rotations, each student chooses a research adviser and begins an independent research project.

Students also receive training in the responsible conduct of research and teaching in the neurosciences. For the Ph.D., the student completes the core curriculum as well as research skills training, comprehensive oral examination, preparation of a dissertation, and final oral examination and defense of the dissertation.

**Core Curriculum for the Ph.D. in Neurosciences**

**Year One, Fall Semester**

- BIOL 750 Advanced Biochemistry
- Cognitive and Systems Neuroscience course
- BIOL 752 Cell Biology
- Lab rotations
- NURO 799 Neuroscience Seminar Series

**Year One, Spring Semester**

- PHS1 846 Advanced Neuroscience
- BIOL 646 Mammalian Physiology
- Lab rotations
- NURO 800 Neuroscience Teaching Principles
- Research Skill: One lecture course or one laboratory course
- NURO 799 Neuroscience Seminar Series

**Year Two, Fall Semester**

- NURO 801 Issues in Scientific Integrity  
  (Offered in the fall every odd-numbered year, 1 credit hour)
- Cell and Molecular Neuroscience course
- First Elective for Molecular and Cellular Neuroscience or
  Cognitive and Systems Neuroscience
- Second Elective for Molecular and Cellular Neuroscience or
  Cognitive and Systems Neuroscience
- NURO 799 Neuroscience Seminar Series

**Year Two, Spring Semester**

- Completion of written and oral comprehensive examination

**Year Three, Fall/Spring**

- NURO 999 Doctoral Dissertation

**Year Four, Fall/Spring**

- NURO 999 Doctoral Dissertation

Students must complete one core course from Cognitive and Systems Neuroscience, one from Cell and Molecular Neuroscience, and one from General Neurobiology; take Bioethics or NURO 801 Issues in Scientific Integrity; and receive training in effective oral communication and teaching by enrolling in one semester of NURO 800 Neuroscience Teaching Principles, which includes a teaching experience.

**Neuroscience Courses**

- **Cognitive and Systems Neuroscience**
  - BIOL 701 Topics in: Brain Disorders and Neurological Disorders (3)
  - NURO 944 Neurophysiology (3)
  - PSYC 961 Biological Foundations of Psychopathology (3)

- **Cell and Molecular Neuroscience**
  - BIOL 673 Cellular and Molecular Neurobiology (3)
  - NURO 775 Chemistry of the Nervous System (3)
  - NURO 848 Molecular Mechanisms of Neurological Disorders (3)

- **General Neurobiology**
  - NURO 846 Advanced Neurobiology (5)
  - NURO 710 Advanced Neurobiology (3)
  - NURO 847 Developmental Neurobiology (2)

- **Neuroscience Seminar**
  - NURO 799 Neuroscience Seminar Series (2)

- **Scientific Integrity**
  - NURO 801 Issues in Scientific Integrity (1)

- **Teaching Experience**
  - NURO 800 Neuroscience Teaching Principles (2)

Continued enrollment in the neuroscience seminar is required, and students present at least two seminars during their graduate careers. In consultation with a five-member faculty advisory committee including at least three members of the neuroscience program, each student chooses electives that provide training relevant to the research goals. All students must com-

---

The Interdisciplinary Neurosciences Program admits students for work on KU’s Lawrence campus or on the KU Medical Center campus in Kansas City.
complete a research skill. Commonly used areas are radiation biology and radiation safety, cell culture methodology, techniques of electron and confocal microscopy, molecular biology laboratory training, computer science training, statistics, and training in electronics and instrumentation. After the first two years, students take the comprehensive oral examination. This consists of a research proposal of the doctoral research, written in NIH format, and an oral examination on the proposal and on general knowledge in neuroscience and related fields.

Neurosciences Courses

NURO 710 Advanced Neurobiology (3). The course will build an in depth knowledge about basic structures and functions of synaptic communication among nerve cells and their targets, and the structure and function of nervous systems. Topics will include nervous system development and synapse formation, structure and function of neurons, physiological and molecular basis of synaptic communication between neurons, mechanisms of synaptic plasticity involved in learning and memory, sensory systems (vision, auditory, vestibular, motor reflexes and pain), processing of neural information at cellular and system levels, synapse regeneration and diseases of the nervous system. Prerequisite: BIOL 435 (Introduction to Neurobiology), or consent of instructor. LEC

NURO 775 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and their current approaches in receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as BIOL 775, CHEM 775, MDCM 775, P&TX 775, and PHCH 775.) Prerequisite: BIOL 600 or equivalent. LEC

NURO 799 Neuroscience Seminar Series (2). Presentations of research papers by faculty, post-doctoral research associates, and graduate students. All graduate students in the Neuroscience program are required to participate in these seminars during their period of training. Each student has to present a seminar once every semester. Presentations by students are evaluated by other graduate students and faculty at the end of each seminar. Prerequisite: Graduate standing in the Neuroscience program. LEC

NURO 800 Neuroscience Teaching Principles (2). This course is to be used by graduate students fulfilling the teaching requirements for the Ph.D. in Neuroscience. The student will function as a discussion leader and lecturer in a limited number of class sessions. Each student will meet with faculty with whom he or she is assisting in preparation of presentation materials and tests. Each student will be evaluated by the faculty mentor and by the students in the class taught. Prerequisite: Graduate standing in Neuroscience. LEC

NURO 801 Issues in Scientific Integrity (3). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientist in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MDCM 801, P&TX 801, PHCH 801 and PHCH 812.) Prerequisite: Graduate standing in the Neuroscience program. LEC

NURO 802 Interdisciplinary Seminar on Ethics in Science and Engineering (1-3). The course will cover basic techniques of moral reasoning, especially as applied to ethical issues in the physical sciences and engineering. Topics covered will include the ethical conduct of research, the federal and professional guidelines for different kinds of research, and the ethical dimensions of publication and professional life. Emphasis will be on practical applications, cases and student involvement. (Same as GS 804, MDCM 804, P&TX 804, and PHCH 804.) Prerequisite: Must be admitted to the program of Pharmacy to enroll in this class. LEC

NURO 825 Research in Neuroscience (1-10). Original investigations at an advanced level in the areas of neuroscience. The research by each student will be performed in the laboratory of one of the faculty mentors of the graduate program in Neuroscience. Prerequisite: Graduate standing in the Neuroscience program. LEC

NURO 844 Neurophysiology (3). Somatosensory, motor and cognitive functions of the brain will be discussed using a combination of lecture and student presentation formats. Current issues and evidence underlying accepted concepts and mechanisms will be emphasized. (Same as PSYH 844.) Prerequisite: PSYH 846 or equivalent and consent of instructor. LEC

NURO 846 Advanced Neuroscience (5). Team-taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846, PHCL 846, and PHSL 846.) Prerequisite: Permission of the course instructor. LEC

NURO 847 Developmental Neurobiology (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction of the neural plate; Axon Guidance; Neural Plate Formation and Cell Survival and Growth; Synapse Formation; Synapse Elimination; and Development of Behavior. (Same as ANAT 847 and PHSL 847.) Prerequisite: Advanced Neuroscience (ANAT 846, NURO 846, PHSL 846) or consent of instructor. LEC

NURO 848 Molecular Mechanisms of Neurological Disorders (3). An in-depth coverage of pathogenic mechanisms in neurological diseases; cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), neurogenetic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, PHSL 848, and PHSL 848) Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

NURO 899 Neuroscience Master’s Thesis (1-11). Hours and credit for this course to be arranged with the mentor. Independent investigation of a research problem in neuroscience, but of limited scope. Prerequisite: Graduate standing in the Neuroscience program and consent of instructor. LEC

NURO 999 Neuroscience Doctoral Dissertation (1-11). Hours and credit for this course to be arranged with the mentor. Conduct of original investigation in neuroscience. Prerequisite: Graduate standing in the Neuroscience program post-oral comprehensive examination and consent of mentor/instructor. THE

Pharmaceutical Chemistry

Chair: Christian Schönich, schonic@ku.edu
2095 Constant Ave., Room 236C
Lawrence, KS 66047-3729
www.pharmchem.ku.edu, (785) 864-4880, fax: (785) 864-5736
Graduate Adviser: Jeff Krise, kris@ku.edu,
236B Simons Laboratories, (785) 864-2626, fax: (785) 864-5736
Professors: Audus, Borchardt, Lunte, Middaugh, Munson, Schönich, Siahaan, Stella, Stobaugh, Topp, Verkhivker, Wilson
Professor Emeritus: Schown
Associate Professors: Berkland, Krise
Assistant Professors: Forrest, Laurence

The Department of Pharmaceutical Chemistry offers a number of core courses designed to hone the student’s skills in aspects of physical/organic chemistry, chemical kinetics, and equilibrium phenomena, which we consider essential in understanding problems of any origin, including biological processes, on a molecular level. Every student entering the program is expected to complete these core courses successfully during the first year.

Research has become increasingly multidisciplinary; students have the option to focus their didactic training in two unique areas of specialization or tracks: pharmaceutical biotechnology and physical/analytical pharmaceutical chemistry. In addition, students can choose from a variety of elective courses that allow them to gain knowledge and skills in areas specific to individual research project interests.

The department places emphasis on excellence in research, making every effort to ensure that students are able to commit as much time as possible to their research projects, which allows them to earn the Ph.D. degree in a timely fashion. The core courses are taught every quarter and can be completed in just two years. Students are fully supported by the department their entire time in the program and are not burdened with time-consuming teaching responsibilities.

Admission

Students with bachelor’s or master’s degrees in chemistry, pharmacy, the biological sciences, material sciences, chemical engineering or related disciplines are encouraged to seek admission. Except under unusual circumstances, we review and accept candidates for admission to fall semester only. All required materials must be received before the department can begin to consider an application.

Required materials to be sent to the Department of Pharmaceutical Chemistry include the following:

1. Graduate Record Examination results (not more than five years old) forwarded directly to Graduate Studies/Department of Pharmaceutical Chemistry from the Educational Testing Service. Photocopies of results are not permissible. The institution code for the University of Kansas is R6871. The Department of Pharmaceutical Chemistry’s code is R0305.

2. Test of English as a Foreign Language results if applicable. These may not be required if you have completed a degree in an English-speaking country. The current list is limited to the U.S.,
England, Australia, and New Zealand. Contact the Office of Graduate
Stud ies to learn if your institution is recognized.
3. Official transcripts from all universities/institutions in
which the applicant has studied.
4. KU’s graduate application. This can be completed online
at www.graduate.ku.edu.
5. The application processing fee (amount varies).
6. A brief personal statement (about one page) that helps us
understand why you are interested in graduate studies and
specifically why KU’s department.
7. An updated copy of your résumé indicating relevant experi-
ence, including educational and research experience, if applicable.
8. Three letters of recommendation from people you believe
are best qualified to comment on your potential to succeed in
graduate studies. There is no template for letters of recommenda-
tion, but please make sure they are on official letterhead.

All of these items should be sent to the following address:

The University of Kansas
Department of Pharmaceutical Chemistry, Attn: Nancy Helm
2095 Constant Ave.
Lawrence, KS 66047-3729

Although the department does not have a formal application
deadline, the faculty begins evaluations of applications around
January 15 each year. To ensure full consideration, it is highly
recommended that complete applications be in the department
far in advance of January 15.

Admitted students receive a competitive stipend, tuition, and
basic health insurance. Students also can be selected to participate in
the Takeru Higuchi and Nigel Manning Ph.D. Inters earch Pro-
gram, allowing them to conduct a portion of their research at the
Victorian College of Pharmacy (www.vcp.monash.edu.au) at
Monash University in Melbourne, Australia. In addition, students
are encouraged to participate in other industrial and/or academic
internship programs the department offers.

A number of fellowship awards are offered to recognize aca-
demic superiority and to assist meritorious students in the timely
completion of their degree programs. The number of fellowships
awarded each year depends upon available funds. For a complete
description of available fellowships and scholarships, visit the
Graduate Studies Web site at www.graduate.ku.edu. Students with
particularly outstanding undergraduate records may be eligible for
special awards. The Department of Pharmaceutical Chemistry
is a Madison and Lila Self Graduate Fellowship Program
(www2.ku.edu/~selffund) partner at KU. The program provides a
generous stipend and tuition to outstanding students for four
years of graduate study. At the department level, the Takeru
Higuchi and Siegfried Lindenbaum Fellowships are awarded
each year to incoming graduate students with high promise.

**M.S. Degree Requirements**

Except under unusual circumstances, the Department of Phar-
maceutical Chemistry does not recruit students seeking the M.S.
degree. However, all students who pass the comprehensive
qualifying examinations for the Ph.D. degree receive a nonthesis
M.S. degree. Students who wish to earn the terminal M.S. degree
must complete satisfactorily at least one third of the courses
recommended for the Ph.D. degree, present a thesis based on
original research or a suitable technical report based on the
review of published research in a particular area, and pass a
final oral general examination.

**Distance Master’s Degree Program.** The department also offers
a distance master’s program. See the Web site for details
(www.pharmchem.ku.edu/distance_masters.php). This program
features the same high-quality lectures and courses offered in
the Ph.D. program but allows students to complete the degree
while working at a remote location. Students typically take one
course a semester. Most of the courses offered by the department
can be taken this way. For questions, contact the director of the
distance master’s program, J. Howard Ryting, ryting@ku.edu,
785-864-3757.

**Ph.D. Degree Requirements**

**Entering Background.** Students entering the program are ex-
pected to be competent in basic principles of physical/organic
chemistry and mathematics. These requirements are typically sat-
ished by most degrees in the basic or pharmaceutical sciences.

**Core Courses.** Each student must complete seven core courses
with grades of B or higher to be eligible to take the comprehensi-
ve core curriculum examination (offered after the spring semes-
ter of the first year in the program):

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 740 Principles of Organic Reactions</td>
<td>3</td>
</tr>
<tr>
<td>PHCH 862 Pharmaceutical Equilibrium</td>
<td>3</td>
</tr>
<tr>
<td>PHCH 976 Advanced Topics in Biopharmaceutics and Pharmacokinetics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring Semester, Year One**

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 742 Physical Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>PHCH 920 Chemical Kinetics</td>
<td>2</td>
</tr>
<tr>
<td>PHCH 972 Mechanisms of Drug Deterioration and Stabilization</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specialized Areas of Emphasis (Tracks).** Upon successful com-
pletion of the core curriculum, students should select a special-
ized area of emphasis or track. Students may select either the
pharmaceutical biotechnology track or the physical/analytical
pharmaceutical chemistry track. The student must take the two
courses for each track listed below. With the consent of his or her
adviser and the department graduate studies adviser, a student
with a cross-disciplinary research project may be able to replace
a required course from a track with a suitable alternative course.

**Pharmaceutical Biotechnology Track — Required Courses:***

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 870 Advanced Pharmaceutical Biotechnology</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 752 Molecular Cell Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 886 Pharmaceutical Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 850 Solid State Stability and Formulation</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 715 Drug Delivery</td>
<td>3</td>
</tr>
</tbody>
</table>

**Physical/Analytical Pharmaceutical Chemistry Track — Required Courses:**

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 865 Pharmaceutical Analysis II</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 977 Advanced Topics in Biopharmaceutics and Pharmacokinetics II</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 756 Cell and Tissue Culture Laboratory (2 credit hours, offered every other spring semester, odd-numbered years)</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 703 Radioisotopes in Radiation Safety in Research (1.25) and BIOL 702 Laboratory Practice: Radiation Safety Procedures (0.75) and BIOL 703 Radioisotopes in Radiation Safety in Research (1.25) (must be taken together)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 718 Laboratory in Molecular Biology (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives and Foreign Language or Other Research Skills Requirement.** Graduate students must take one elective course in addition to the previously listed courses. This may be from the courses offered by the Department of Pharmaceutical Chemistry (see below) or from any other department on campus with prior approval from the student’s research adviser. Examples of additional courses offered by this department are

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 866 Pharmaceutical Mass Transport</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 976 Advanced Topics in Biopharmaceutics and Pharmacokinetics II</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 715 Drug Delivery</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHCH 865 Pharmaceutical Analysis II</td>
<td>3</td>
</tr>
</tbody>
</table>

To complete the didactic component, the student must com-
plete the FLORS (foreign language or other research skill) re-
quirement. This may be met by successfully completing an ac-
ceptable skills development course. Courses that have been ac-
ccepted to fulfill the FLORS requirement are as follows (other
courses may be permissible upon approval of the pharmaceuti-
chemical committee):

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 672 Gene Expression</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 688 The Molecular Biology of Cancer</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 702 Laboratory Practice: Radiation Safety Procedures</td>
<td>0.75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 703 Radioisotopes in Radiation Safety in Research (1.25) (must be taken together)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 704 Research Animal Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 718 Laboratory in Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Years Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 756 Cell and Tissue Culture Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>
Seminar Requirements. All graduate students must attend the weekly departmental seminar. Seminars consist of presentations by guest speakers, faculty members, and students. Typically, graduate students are required to present at least two departmental seminars during their time in the program. The seminar may be based on progress in their research or on a literature review of work related to their research.

Dissertation. Each Ph.D. candidate must submit and defend a dissertation resulting from research of sufficient originality and quality for publication in peer-reviewed scientific journals. The research is conducted under the supervision and guidance of the student’s adviser, with input from the dissertation committee as needed. The median time for students to complete the Ph.D. degree is 5.3 years.

Facilities
The department is on KU’s west campus in Simons Biosciences Research Laboratories, a 30,000-square-foot, two-story research facility completed in 1996. There are 18 general laboratories and an experimental cancer chemotherapeutic-agent testing laboratory, a radioisotope handling room, a molecular biology laboratory, a natural products extraction laboratory, and a liquid chromatography mass spectrometry laboratory. The laboratories contain an extensive array of equipment and instrumentation. The department currently maintains five mass spectrometers. There are facilities for cell culture, several advanced fluorescence microscopes, NMRs (both solution state and solid state), and numerous components and software for proteomic analysis. In addition, an extensive array of instrumentation is available for the characterization of both small and macromolecules including a circular dichroism spectrophotometer, FTIR, and light-scattering instrumentation to name a few. An amazing array of equipment and service facilities help with nearly any aspect of research. For example, the Molecular Structures Group (www.msg.ku.edu) is a campuswide facility encompassing NMR, MS, X-ray Crystallography, Biochemical Research Service, and Molecular Graphics and Modeling Laboratories available to all campus members for a nominal fee. Near the Simons building, the structural biology wing of the MSG houses an 800-mHz NMR along with many other instruments and services. The recently completed Multidisciplinary Research Building houses researchers from a variety of disciplines to encourage interaction and collaboration. Professors Middaugh, Lunte, Berkland, and Laurence occupy space in this new facility.

**Pharmaceutical Chemistry Courses**

*PHCH 510 Emerging Trends in Pharmaceutical Chemistry I (1)*

*PHCH 511 Emerging Trends in Pharmaceutical Chemistry II (1)*

*PHCH 512 Roadmap to Drug Development (1)*

*PHCH 513 Dispelling the Myths about Drug Discovery and Development: **(1)**

*PHCH 517 Pharmacy Calculations (2)*

*PHCH 518 Physical-Chemical Principles of Solution Dosage Forms (3)*

*PHCH 605 Vaccines (1)*

*PHCH 625 Pharmacokinetics (3)*

*PHCH 626 Biopharmaceutics and Drug Delivery (3)*

*PHCH 667 Introduction to Clinical Chemistry (2)*

*PHCH 686 Special Topics in Pharmacodynamics (1-2)*

*PHCH 690 Undergraduate Research in Pharmaceutical Chemistry (1-5)*

*PHCH 694 Problems in Pharmaceutical Chemistry (1-5)*

*PHCH 700 Experimental Methods in Pharmaceutical Chemistry (1-5)*

Discussions, lectures, and laboratory work designed to acquaint and provide hands on experiences to advanced undergraduate and graduate students with experimental design, methods, and approaches relevant to modern research in pharmaceutical chemistry. Prerequisite: Consent of instructor. LEC

*PHCH 701 Bioinformatics I (5)*

First semester of a two-semester course. The course is designed to introduce the most important and basic concepts, methods, and tools used in Bioinformatics. Topics include (but not limited to) bioinformatics databases, sequence and structure alignment, protein structure prediction, protein folding, protein-protein interaction, Monte Carlo simulation, and molecular dynamics. Emphasis will be put on the understanding and utilization of these concepts and algorithms. The objective is to help the students to reach rapidly the frontier of bioinformatics and be able to use the bioinformatics tools to solve the problems on their own research. (Same as BINF 701). LEC

*PHCH 702 Bioinformatics II (5)*

Second semester of a two-semester course in bioinformatics and computational biology. The course is designed to introduce the most important and basic concepts, methods, and tools used in Bioinformatics. Topics include (but not limited to) bioinformatics databases, sequence and structure alignment, protein structure prediction, protein folding, protein-protein interaction, Monte Carlo simulation, and molecular dynamics. Emphasis will be put on the understanding and utilization of these concepts and algorithms. The objective is to help the students to reach rapidly the frontier of bioinformatics and be able to use the bioinformatics tools to solve the problems on their own research. (Same as BINF 702). LEC

*PHCH 715 Drug Delivery (3)*

The course will survey the latest technology for delivering pharmaceuticals and biologicals to reduce side effects and enhance drug efficacy. The course will survey the latest research in this area and examine more classical delivery methods. A qualitative and quantitative understanding of drug delivery practice and theory is the goal. Prerequisite: Master’s or Ph.D. candidate in Engineering, Chemistry, Medicinal Chemistry, or Pharmaceutical Chemistry (by appointment for seniors or graduate students in departments not listed). LEC

*PHCH 716 Drug Delivery (3)*

The course will survey the latest technology for delivering pharmaceuticals and biologicals to reduce side effects and enhance drug efficacy. The course will survey the latest research in this area and examine more classical delivery methods. A qualitative and quantitative understanding of drug delivery practice and theory is the goal. This course is only open to distance education students. Prerequisite: Master’s candidate in Pharmaceutical Chemistry. LEC

*PHCH 720 Bibliography of Pharmaceutical Chemistry (1)*

A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of pharmaceutical chemistry and physical pharmacy. LEC

*PHCH 725 Molecular Cell Biology (3)*

Fundamental and advanced concepts in cell biology and the molecular interactions responsible for cell function, homeostasis and disease will be presented. Current analytical methods for examining cells and their molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. (Same as C&PE 725) LEC

*PHCH 726 Molecular Cell Biology (3)*

Fundamental and advanced concepts in cell biology and the molecular interactions responsible for cell function, homeostasis and disease will be presented. Current analytical methods for examining cells and their molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. This course is only open to distance education students. LEC

*PHCH 745 Advanced Drug Delivery (2)*

An advanced course focusing on current and future strategies for targeted drug delivery to specific tissue sites. The emphasis of lectures and discussions is on routes of drug distribution, metabolism, excretion, and delivery practice and theory is the goal. Prerequisite: Graduate standing or consent of the instructor. LEC

*PHCH 770 Chemistry of the Nervous System (3)*

A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as P&T XX75, BIOL 775, CHEM 775, MDCM 775 and NURO 775). Prerequisite: BIOL 600 or equivalent. LEC

The Center for Biomedical Research combines several biomedical research units that have brought KU to international prominence in this field.

The School of Pharmacy operates one of the most extensive programs of research and graduate education in the pharmaceutical sciences in the country.
PHCH 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical techniques and special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher/student, and citizen. Discussion will be based on good scientific and ethical practice. Prerequisite: Grades of C- or better in a satisfactory/unsatisfactory basis. (Same as MDCM 801, NURO 801, P&TX 801 and PHCH 802.) LEC

PHCH 802 Issues of Scientific Integrity (3). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, as author, grantee, reviewer, employer/employee, teacher/student, and citizen. Discussion will focus on case histories graded on a satisfactory/unsatisfactory basis. This course is only open to distance education students. (Same as PHCH 801, MDCM 801, NURO 801, and P&TX 801.) LEC

PHCH 804 Interdisciplinary Seminar on Ethics in Science and Engineering (1-3). The course will cover basic techniques of moral reasoning, especially as applied to ethical issues in the physical sciences and engineering. Topics covered will include the ethical conduct of research, the federal and professional guidelines for different kinds of research, and the ethical dimensions of publication and professional life. Emphasis will be on practical applications, cases and student involvement. (Same as GS 804, MDCM 804, NURO 804, and P&TX 804.) Prerequisite: Must be admitted to the program or division of Pharmacy to enroll in this class. LEC

PHCH 850 Solid State Stability and Formulation (3-4). A course on development of the principles of solid state, stability of small and large drug molecules, and drug candidates in the solid state. The first two-thirds of the course will focus on small molecules, with the last third being devoted to proteins. Prerequisite: Graduate standing in PHCH or consent of instructor. LEC

PHCH 863 Equilibria (3-4). A course on equilibrium in aqueous and non-aqueous systems with emphasis on solutions of interest to pharmaceutical technology. Included are association-dissociation equilibria, complexation, protein binding calculation of species concentrations, estimation of solubility and ionization constant. Methods for determination of chemical potential in solution will be presented. LEC

PHCH 865 Pharmaceutical Analysis II (2). This course is intended to be a comprehensive treatment of modern techniques used to validate analytical methods for the determination of drugs in the bulk form, pharmaceutical formulations, biological samples and other relevant media. The emphasis will be on chromatographic techniques reflecting the present position that these techniques occupy in the field of pharmaceutical and biomedical analysis. Prerequisite: Previous or concurrent enrollment in PHCH 684. LEC

PHCH 866 Pharmaceutical Mass Transport (2). A course on mass transport problems of pharmaceutical interest. Topics include physiological pharmacokinetic models, transport, and drug delivery systems. Prerequisite: MATH 320 or equivalent. LEC

PHCH 867 Pharmaceutical Mass Transport (3). A course on mass transport problems of pharmaceutical interest. Topics include physiological pharmacokinetic models, drug and biological transport, and drug delivery systems. This course is only open to distance education students. Prerequisite: MATH 320 or equivalent. LEC

PHCH 868 Pharmaceutical Analysis (3). Advanced course on pharmaceutical analysis. This course is only open to distance education students. LEC

PHCH 870 Advanced Pharmaceutical Biotechnology (3). A course designed to emphasize the important facets of recombinant proteins as pharmaceutical agents. Basics of protein structure and analysis will be introduced, and methods for production, isolation, and purification of recombinant proteins will be described. Potential chemical and physical degradation processes and strategies for circumventing these difficulties will be discussed. Prerequisite: BIOL 600 or consent of instructor. LEC

PHCH 871 Advanced Pharmaceutical Biotechnology (3). A course designed to emphasize the important facets of recombinant proteins as pharmaceutical agents. Basics of protein structure and analysis will be introduced, and methods for production, isolation, and purification of recombinant proteins will be described. Potential chemical and physical degradation processes and strategies for circumventing these difficulties will be discussed. Prerequisite: BIOL 600 or consent of instructor. LEC

PHCH 895 Research in Pharmaceutical Chemistry (1-11). Advanced level research in collaboration with a faculty member in pharmaceutical chemistry or related areas. This course is limited to students who are doing research, but not necessarily working toward a master’s or a doctoral degree. RSH

PHCH 898 Master’s Thesis (1-5). Master’s Thesis. This course is only open to distance education students. THE

PHCH 899 Master’s Thesis (1-11). Graded on a Satisfactory/Fail basis. THE

PHCH 920 Chemical Kinetics (2). This course provides the principles of kinetic data analysis as applied to problems in pharmaceutical chemistry. Topics include the setup and solution of rate equations related to chemical reactions; simplifications and approximations in complex chemical systems; formation and solvent and salt rate effects; and diffusion and activation controlled reactions. This course is only open to distance education students. LEC

PHCH 972 Mechanisms of Drug Deterioration and Stabilization (2-4). A course dealing with mechanisms and chemical kinetics of drug deterioration and stabilization. This course is only open to distance education students. LEC

PHCH 973 Mechanisms of Drug Deterioration and Stabilization (3). A course dealing with mechanisms and chemical kinetics of drug deterioration and stabilization. This course is only open to distance education students. LEC

PHCH 974 Advanced Special Topics in Pharmaceutical Chemistry (1-3). Various topics pertinent to the area of pharmaceutical chemistry will be explored. Graded on a satisfactory/unsatisfactory basis. LEC

PHCH 975 Advanced Topics in Biopharmaceutics and Pharmacokinetics (3). A quantitative treatment of the processes involved with drug absorption, distribution, metabolism, and excretion in living systems. This course open only to distance education students. LEC

PHCH 976 Advanced Topics in Biopharmaceutics and Pharmacokinetics II (3). A quantitative treatment of the processes involved with drug absorption, distribution, metabolism, and excretion in living systems. This course open only to on-campus students. LEC

PHCH 977 Advanced Topics in Biopharmaceutics and Pharmacokinetics II (2). A course addressing special topics in biopharmaceutics and pharmacokinetics including complex modeling, treatment of data using computers, cell culture systems, and research topics. LEC

PHCH 978 Pharmaceutical Chemistry Seminar (1). A seminar on the chemistry of pharmaceutical systems. LEC

PHCH 979 Advanced Topics in Biopharmaceutics and Pharmacokinetics II (3). A course addressing special topics in biopharmaceutics and pharmacokinetics including complex modeling, treatment of data using computers, cell culture systems, and research topics. This course is only open to distance education students. LEC

PHCH 990 Postdoctoral Research in Pharmaceutical Chemistry (1-11). Advanced level research in collaboration with a faculty member involving projects in pharmaceutical chemistry or related areas. Prerequisite: Doctoral degree or equivalent in an appropriate related area and consent of instructor. RSH

PHCH 999 Doctoral Dissertation in Pharmaceutical Chemistry (1-11). THE

Pharmacology and Toxicology

Chair: Nancy Muma, nmuma@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7572
www.pharmtox.pharm.ku.edu, (785) 864-4001
Graduate Adviser: Rick T. Dobrovsky, dobrovsky@ku.edu, 5056 Malott Hall, (785) 864-3531

Professors: Dobrovsky, Fowler, E. Michaelis, M. Michaelis, Muma

Courtesy Professors: Audus, Seifert, Leeder

Associate Professors: Shi, Staudinger

Assistant Professors: Carrasco, Moskovitz

Admission

Admission is based on the student’s undergraduate record in a relevant field, Graduate Record Examination scores, and three letters of recommendation. A minimum grade-point average of 3.0 on a 4.0 scale is required. Applications from non-English-speaking countries must include a copy of the Test of English as a Foreign Language score. Acceptance depends on the availability of funding, space, and faculty commitment.

Students are expected to have bachelor’s degrees in pharmacy, biological or physical sciences, or the equivalent. Prerequisite courses include four semesters of chemistry and four semesters of biology including laboratory courses in biochemistry and mammalian physiology. Prerequisites may be completed after admission, with the deficiencies to be corrected as soon as possible.

Submit your application online at www.gradient.ku.edu. Send transcripts of all completed college and university course work and all other requested application materials to

The University of Kansas
Department of Pharmacology and Toxicology
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7572

THE UNIVERSITY OF KANSAS 2009-2011

334
M.S. Degree Requirements
The department offers an M.S. degree in pharmacology and toxicology only in special cases where attainment of the Ph.D. is inappropriate. To obtain an M.S. degree, a student must take advanced courses in pharmacology and toxicology and related fields, including biotechnology. A thesis based on original research generally is required.

Ph.D. Degree Requirements

Course Work. Students must earn credit in the following courses or their equivalents:
P&TX 700 Professional Issues in the Biomedical Sciences
Students must complete 8 credit hours of Advanced Pharmacology
(P&TX 730-P&TX 735) consisting of four 2-credit-hour modules.
P&TX 730 Advanced Pharmacology I: Central Nervous System and Autonomic Nervous System (required)
P&TX 731 Advanced Pharmacology II: Cardiovascular and Renal System (required)
P&TX 732 Advanced Pharmacology III: Hematology and Cancer Biology (elective)
P&TX 733 Advanced Pharmacology IV: Infectious and Respiratory Diseases (required)
P&TX 734 Advanced Pharmacology V: Endocrinology (elective)
P&TX 735 Advanced Pharmacology VI: Metabolism and GI (elective)
P&TX 740 Advanced Biotechnology
P&TX 742 Experimental Pharmacology
P&TX 747 Molecular Toxicology
P&TX 799 Pharmacology and Toxicology Seminar
P&TX 800 Pharmacology and Toxicology Teaching Principles
P&TX 801 Issues in Scientific Integrity
P&TX 803 Pharmacology Literature Review I
P&TX 805 Pharmacology Literature Review II
BIOL 841 Biometry I

Students also must complete 3 credit hours of advanced graduate work in an elective course.

On passing the comprehensive oral examination, an aspirant for the Ph.D. degree becomes a candidate, and a dissertation committee is appointed, in accordance with KU general regulations. The dissertation committee normally consists of five members of the Graduate Faculty. Three members of the committee must be pharmacology and toxicology faculty members.

Research Skills Requirement. In consultation with the adviser, each student develops research skills relevant to the chosen research program. A great deal of flexibility is allowed in selecting the research skills. All graduate students must complete training in an area that can become useful in future research design and data analysis. Representative areas are computer science; statistical methodology; cellular imaging techniques; histochemistry and cytochemistry; tissue culture methods; radioisotope techniques; methods in immunology, molecular biology, or protein chemistry; bioinformatics; and molecular modeling procedures.

Comprehensive Examinations. The Ph.D. aspirant takes the comprehensive exam after completing most of the course work and fulfilling the research skills requirement. The comprehensive examination is composed of three parts:

1. Written Comprehensive Examination: Each student must complete two written examinations to complete P&TX 803 and P&TX 805.

2. Preparation of a Literature Review and Research Proposal: Each student must prepare a literature review and a research proposal on a current topic in pharmacology or toxicology.

3. Oral Comprehensive Examination: After approval of the literature review/research proposal by the student’s advisory committee, each student, in consultation with the adviser, takes an oral examination covering the student’s major field.

Dissertation. Shortly after entering the program, the student, with the adviser’s assistance, selects a dissertation project. After the oral comprehensive examination, the student presents the dissertation research project to the advisory committee and receives periodic advice from this committee throughout the project. Upon acceptance of the dissertation by the advisory committee, the candidate must pass a final oral examination, including a defense of the dissertation before the dissertation committee and any other interested members of the Graduate Faculty.

Facilities
Research facilities offer a range of modern instrumentation and many research support services. Major instruments include tissue culture rooms, ultra-centrifuges, flow cytometry, scintillation counters, high-pressure liquid chromatography systems, computer-driven fluorometers and spectrophotometers, and light and fluorescence microscopy systems. Several laboratory groups have more specialized equipment for molecular biology, protein purification and analysis, electrophysiology and calcium imaging, immunochrometry, and related techniques. All labs have current computer technology, including hardware and extensive software for imaging, data analysis, data reduction, protein and gene analysis, and statistical tests. Specialized research support labs include a confocal and an electron microscopy laboratory with both transmission and scanning scopes; a transgenic and knockout mouse facility; a gene-chip and microarray facility; a Biochemical Research Service Laboratory with DNA sequencing, DNA microarrays, peptide synthesis, fermentation, and MALDI-TOF instrumentation; a Molecular Graphics and Modeling Laboratory with extensive data bases for protein structures; an NMR facility; an X-ray Crystallography Laboratory; a Mass Spectrometry Laboratory; and an Instrumentation Design Laboratory.

Pharmacology and Toxicology Courses

P&TX 630 Pharmacology I (4).
P&TX 631 Pharmacology II (4).
P&TX 632 Pharmacology III (4).
P&TX 633 Pharmacology IV (3).
P&TX 640 Toxicology (2).
P&TX 641 Antibiotics: Benefits and Risks (1).
P&TX 642 Obesity, Diabetes, and Metabolic Syndrome: Current Concepts (1).
P&TX 643 Current Concepts of Neurodegenerative Disease (1).
P&TX 694 Undergraduate Laboratory: Research in Pharmacology and Toxicology (1-5).
P&TX 698 Library Problems in Pharmacology and Toxicology (1-5).
P&TX 700 Professional Issues in the Biomedical Sciences (2).
P&TX 725 Biomedical Bibliography (1). The use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on pharmacological, physiological, biochemical, and medical literature. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Graduate standing. LEC
P&TX 730 Advanced Pharmacology I (2). A detailed study of the fundamentals of autonomic nervous system, central nervous system, and their pharmacology. The student will attend P&TX 652 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC
P&TX 731 Advanced Pharmacology II (2). A detailed study of the fundamentals of cardiovascular system, renal system and their pharmacology. The student will attend P&TX 652 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC
P&TX 732 Advanced Pharmacology III (2). A detailed study of the fundamentals of hematology, cancer biology and their pharmacology. The student will attend P&TX 631 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC
P&TX 733 Advanced Pharmacology IV (2). A detailed study of the fundamentals of infectious diseases, respiratory diseases and their pharmacology. The student will attend P&TX 631 lectures and meet separately with the faculty for additional discussions of advanced material on the topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

GRADUATE CATALOG
Pharmacy
335
Pharmacology and Toxicology | Takeru Higuchi & Nigel Manning Intersearch Ph.D. Program

P&TX 734 Advanced Pharmacology V: Endocrinology (3). A detailed study of the fundamentals of endocrinology and associated pharmacology. The student will attend P&TX 631 lectures and meet separately with the faculty for additional discussions of advanced material. Prerequisite: Graduate standing in Pharmacology and Toxicology Program. LEC

P&TX 735 Advanced Pharmacology VI: Metabolism and GI (2). A detailed study of the fundamentals of energy metabolism and obesity, gastrointestinal pharmacology, and vitamins. The student will attend P&TX 633 lectures and meet separately with the faculty for additional discussion of advanced material on the topic. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

P&TX 740 Advanced Biotechnology (3). An examination of basic principles of molecular biology, immunology, and protein chemistry as they apply to the identification, production, stability, delivery, and monitoring of new therapeutic agents provided by the expanding biotechnology industry. Students will attend lectures in P&TX 635 and meet separately with faculty for additional discussions of advanced material on the topic. The students will be examined on the advanced material. Prerequisite: Graduate standing in Pharmacology and Toxicology Program. LEC

P&TX 742 Experimental Pharmacology (4). Experimental approaches to understanding mechanism of drug action. Use of drugs as tools to understand functioning of biological systems will also be stressed. Historically important experiments will be discussed along with experiments which are currently used to define drug mechanisms. Topics will include: dose-response, drug receptors, drug metabolism, chemotherapy, as well as autonomic CNS, cardiovascular and renal pharmacology. (Same as MDCM 742.) Prerequisite: BIOL 726 or equivalent, or consent of instructor. LEC

P&TX 747 Molecular Toxicology (4). The molecular basis involved in the poisoning and detoxification process will be covered. Topics will include drug metabolism and disposition, chemical, genetic, and developmental toxicity. Prerequisites: BIOL 600, BIOL 762 or equivalent, or consent of instructor. LEC

P&TX 775 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as BIOL 775, CHEM 775, MDCM 775, NURO 775, and PHCH 775.) Prerequisite: BIOL 600 or equivalent. LEC

P&TX 799 Pharmacology and Toxicology Seminar (1-2). A review of current literature and research in pharmacology and toxicology. Required of all graduate students in the department every fall and spring semester. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Graduate standing in P&TX. LEC

P&TX 800 Pharmacology and Toxicology Teaching Principles (2). This course is to be used by graduate students fulfilling the teaching requirements for the Ph.D. in pharmacology and toxicology. The student will function as a discussion leader and lecturer in a limited number of class sessions. Each student will meet with the faculty whom he or she is assisting. Prerequisite: Graduate standing in pharmacology and toxicology program. RSH

P&TX 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientist in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. Graded on a satisfactory/unsatisfactory basis. (Same as MDCM 801, NURO 801, PHCH 801 and PHCH 802.) LEC

P&TX 803 Pharmacology Literature Review I (1). This course is designed for graduate students and will fulfill the first written exam requirement for the Ph.D. in pharmacology and Toxicology. The student will research and write a six-page literature review by choosing a topic provided by the faculty. Prerequisite: Graduate standing in Pharmacology and Toxicology Program. LEC

P&TX 804 Interdisciplinary Seminar on Ethics in Science and Engineering (1-3). The course will cover basic techniques of moral reasoning, especially as applied to ethical issues in the physical sciences and engineering. Topics covered will include the ethical conduct of research, the federal and professional guidelines for different kinds of research, and the ethical dimensions of publication and professional life. Emphasis will be on practical applications, cases and student involvement. (Same as GS 804, MDCM 804, NURO 804, and PHCH 804.) Prerequisite: Must be admitted to the program or division of Pharmacy to enroll in this class. LEC

P&TX 805 Pharmacology Literature Review II (1). This course is designed for graduate students and will fulfill the second written exam requirement for the Ph.D. in pharmacology and Toxicology. The student will research and write a twelve-page literature review by choosing a topic provided by the faculty. Prerequisite: Graduate standing in Pharmacology and Toxicology Program. LEC

P&TX 825 Research in Pharmacology and Toxicology (1-10). Original investigations at an advanced level in the areas of pharmacology or toxicology or related fields. This research will be performed by graduate students in collaboration with a faculty member. Prerequisite: Graduate standing and consent of instructor. RSH

P&TX 899 Master’s Thesis (1-11). Hours and credit to be arranged. Independent investigation of a research problem of limited scope. Prerequisite: Graduate standing in P&TX and consent of instructor. THE

P&TX 901 Seminar: Psychotropic Drugs Across the Life Span (3). Through the use of both traditional didactic and student participatory instructional methods, the seminar will address basic pharmacological concepts (i.e., assimilation, distribution, elimination, dose effect analyses, kinetics, etc.), neuropharmacological principles (i.e., neuronal mechanisms of action of psychotropic drugs, animal models of human psychiatric disorders, etc.), and therapeutics (i.e., drug treatment of psychoses, depression, Alzheimer’s disease, etc.). Special attention will be devoted to the organism’s age (and history) as these may influence psychopharmacological outcomes. LEC

P&TX 902 Behavioral Neurobiology (3). This course will examine the bases for reciprocal dynamic interactions between central nervous system function and structure (“nature”) and experience (“nurture”). “Nature” will be explored using principles and methodologies derived from systems and molecular pharmacology, and neurochemistry. The effects of “nurture” on brain will involve issues derived from behavioral pharmacology, environmental, enrichment, and human brain imaging. During the course, with the help of the instructor, students will be expected to discuss and critically analyze research articles for subsequent presentation to the class. LEC

P&TX 950 Molecular Pharmacology (2). A study of drug effects at the cellular, subcellular, and molecular levels, and the correlation with tissue and organ reactions. Prerequisite: Graduate standing in P&TX and consent of instructor. LEC

P&TX 990 Postdoctoral Research (1-11). Advanced level research in collaboration with a faculty member in the department. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Doctoral degree or equivalent in an appropriate related area, and consent of instructor. RSH

P&TX 999 Doctoral Dissertation (1-11). Hours and credit to be arranged. Original investigation in pharmacology and toxicology. Prerequisite: Consent of instructor. THE

Takeru Higuchi and Nigel Manning
Intersearch Ph.D. Program

Chair: Valentino J. Stella
2095 Constant Ave., Room 121B
Lawrence, KS 66047-3729
www.hbc.ku.edu/phch/takeru.htm, (785) 864-4820

Professors: Borchardt, Chapman (Australia), Grunewald, E. Michaelis, Fincham, Reed (Australia), Stella, Stewart (Australia)
The Takeru Higuchi and Nigel Manning Intersearch Program is an international pharmaceutical graduate research program conducted by the United States and Australia through the University of Kansas and the Victorian College of Pharmacy, Monash University, Melbourne, Australia. It is a cooperative program with the Departments of Medicinal Chemistry, Pharmaceutical Chemistry, and Pharmacology and Toxicology. Intersearch trains doctors of philosophy by teaching methods of research and offers a broadening international experience.

A joint degree is possible under the names of both institutions. Graduates receive training suitable to the needs of the pharmaceutical industry and institutions of higher learning in both countries.

The program admits students from either institution to either campus. Each student entering the program must study for at least 12 months on each campus. Round-trip tourist-class fares are provided, and additional financial support generally is available.

Pharmacologists and toxicologists work on the cutting edge of new developments in the biomedical sciences through jobs in academia, the biotechnology/pharmaceutical industry, and federal research institutes.

336
THE UNIVERSITY OF KANSAS 2009-2011
School of Social Welfare

Contents

The School .................................................................. 338
Master of Social Work ...................................................... 338
  M.S.W. Admission ................................................................. 338
  Two-Year Full-Time or Part-Time Program ......................... 338
  Advanced-Standing Criteria .................................................. 338
  Application Procedure for All Options ................................. 338
  Final Deadlines ................................................................. 339
  Planning Your Commitment ................................................. 339
  M.S.W. Degree Requirements .............................................. 339
  M.S.W. Foundation Curriculum ............................................ 339
    Social Work Practice .......................................................... 339
    Community & Organizational Practice .................................. 339
    Social Policy & Program Analysis ......................................... 339
    Human Behavior in the Social Environment ......................... 339
    Social Work Research .......................................................... 339
    Field Practicum ................................................................... 339
    Foundation Courses ............................................................ 339
  M.S.W. Advanced-Level Curriculum ...................................... 339
    Clinical Social Work Concentration .................................... 339
    Social Work Administrative & Advocacy Practice Concentration .. 339
    Field Practicum ................................................................... 340
    Field Practicum Alternative Plans ....................................... 340
    Concurrent Practicum Exception ........................................... 340
    Summer Block Practicum ..................................................... 340
    Employment-Based Practicum ............................................. 340
    Prior Work Experience ........................................................ 340
  Field Practicum ................................................................... 340
  Testing Out of First-Year Courses ........................................ 341
  Intermit & Withdrawal ......................................................... 341
  Changing from Full-Time to Part-Time Status ....................... 341
  Grading ............................................................................... 341
  Joint Degree in Social Work & Law ...................................... 341
  School Social Work ......................................................... 341
  Doctor of Philosophy .......................................................... 341
    Program Highlights ............................................................ 341
    Curriculum ........................................................................ 342
    Ph.D. Admission ................................................................. 342
      Qualifications for Admission .............................................. 342
      Application Timeline .......................................................... 342
      Teaching & Research .......................................................... 342
      Ph.D. Degree Requirements .............................................. 342
        Doctoral Courses ............................................................ 342
    Tuition & Fees .................................................................. 342
    Financial Aid ..................................................................... 343
    Scholarships & Awards ....................................................... 343
    International Students ........................................................ 343
    Social Welfare Courses ....................................................... 343

See pages 12-13 for admission procedures.

M.S.W. application fees: paper $45, online $25.
Domestic Ph.D. students in social welfare application fees: paper $55, online $45.
International Ph.D. students in social welfare application fees: paper $60, online $55.

Major themes of the KU School of Social Welfare include the Strengths Perspective,
a practice-centered curriculum, a critical perspective, and a commitment to social justice.
The School

KU’s School of Social Welfare offers the only comprehensive program in social work in Kansas: the professional degrees of Doctor of Philosophy in Social Work, Master of Social Work, and Bachelor of Social Work. The M.S.W. and B.S.W. programs are accredited by the Council on Social Work Education. Twenty-four full-time faculty members teach in the three programs, which enroll about 500 students.

Master of Social Work

The Master of Social Work degree prepares graduates for advanced social work practice in one of two broad areas—clinical social work practice with individuals, families, and groups or social work administrative and advocacy practice aimed at macro-level practice. The first level of the master’s curriculum is a generalist foundation required of all students. The foundation consists of six classroom courses and a two-semester practicum that reflects the generalist intent.

At the advanced level, students choose a concentration in clinical social work practice with a focus in a particular field of practice (child and family, health/mental health, aging) or social work administrative and advocacy practice. The advanced-level practicum implements students’ choice of concentration.

Full-time students complete the program in two years. Students admitted for part-time study may extend the program for up to four years.

The Advanced-Standing Program admits individuals with B.S.W. degrees with strong academic records. Applicants generally have relevant post-degree work experience.

The regular M.S.W. program is available full time or part time. Part-time students complete the program in either three or four years. On KU’s Edwards Campus, part-time students can complete the M.S.W. curriculum in afternoon, evening, and Saturday classes.

M.S.W. Admission

Two-Year Full-Time or Part-Time Program. Applicants must have bachelor’s degrees from accredited universities before the start of the M.S.W. course and field work. Applicants’ undergraduate studies must reflect the successful completion of liberal arts courses, including those in the social sciences and humanities which focus on the development of knowledge in communication; social, biological, and behavioral sciences; history; philosophy and the ways in which knowledge is gained and applied; and the value of a multicultural and diverse society.

Advanced-Standing Criteria. The Advanced-Standing Program requires a bachelor’s degree from a CSWE-accredited social work program with a grade-point average of at least 3.0. A higher grade point is desirable. Applicants who earned their social work bachelor’s degrees within the two years before applying to the M.S.W. program must submit a copy of their practicum evaluation as well as a letter of recommendation for graduate studies completed by one of their practice instructors. Admission decisions take into account the applicants’ amount and types of service experience, letters of recommendation, and undergraduate grade-point averages and courses completed.

The Advanced-Standing Program is a full-time, one-year program. Under special and limited circumstances, a part-time program may be allowed, if the student’s plan for part-time study is consistent with the educational mission of the school and has been approved by the M.S.W. program director. To be considered for advanced standing, current seniors should submit transcripts that document their fall semester grades and their successful practicum experience. All applications to either the two year or the Advanced-Standing Program become the property of the University of Kansas.

Application Procedure for All Options. A minimum undergraduate grade-point average of 3.0 on a 4.0 scale is required. The admissions committee takes into account special circumstances such as improvement of grades in upper-division or graduate courses. We look for evidence of an applicant’s commitment to the well-being of people and communities; a well-developed sense of self; emotional maturity and the ability to think clearly, creatively, and independently; Graduate Record Examination scores are not required.

Applications are reviewed beginning in October. Admission decisions take into account the applicants’ age, graduate course work (if any), volunteer and work experience especially related to social work, and evidence of potential for a social work career in the application narrative and references.

Applications can be filled out and submitted online at www.socwel.ku.edu beginning October 1 each year. The applicant is responsible for gathering the following supporting materials and submitting them in one envelope: one copy of student-issued transcripts from all previously attended schools regardless of degree status, three letters of references on forms provided, and a nonrefundable application fee of $25 for online applications or $45 for paper applications. Applicants submitting paper applications also must include the School of Social Welfare application and a narrative statement. Please observe the specific instructions provided in application packets and on our website.

Applications are reviewed beginning in October. Admission decisions are made in the spring of each year. Advanced-Stand-
ing M.S.W. students begin in June; all other M.S.W. students (full time and part time) begin in August.

**Final Deadlines.** All applications are reviewed upon receipt. The deadline for the Advanced-Standing Program is January 15. The deadline for applications to the regular M.S.W. program (full time or part time) is February 15. Early application is encouraged. For students who submit paper applications by December 1, the application fee is waived.

To ensure your privacy, we are unable to provide admission decisions by telephone. All applicants are notified in writing.

All application materials become the property of the University of Kansas.

**Planning Your Commitment.** Students are admitted on either a full- or a part-time basis. In making decisions about full- or part-time study, students should consider that each class requires several hours of preparation each week. The program is demanding; students can expect reading assignments and paper preparation and should be prepared to fulfill practicum commitments averaging two-and-one-half to three days per week. Students admitted part time take 6 credit hours each semester the first year. Full-time students enroll in 16 credit hours each semester. Currently, the M.S.W. program is a weekday program in Lawrence. Late-afternoon, evening, and Saturday courses are offered on the Edwards Campus.

**M.S.W. Degree Requirements**

The School of Social Welfare requires a total of 64 credit hours for the M.S.W. degree, consisting of

- Thirty-six credit hours of classroom work maintaining a grade-point average of 3.0 (B)—a total of 108 grade points on a 4.0 grading scale.
- Twenty-eight credit hours of field practicum with an S grade for satisfactory performance.
- Two sequential semesters of 10-credit-hour enrollments are necessary to meet residence requirements.
- Recommendation of the faculty of the School of Social Welfare to the registrar that the master’s degree be granted.

*Students who maintain grade-point averages of at least 3.0 in the foundation courses are eligible to take additional courses beyond the minimum requirement.*

**M.S.W. Foundation Curriculum**

**Social Work Practice (SW 710, SW 711).** Based on the school’s unique strengths perspective, courses provide core knowledge and skills essential for working with individuals, families, and groups.

**Community and Organizational Practice (SW 713).** This practice class gives students an understanding of the core elements of practice in organizations and communities.

**Social Policy and Program Analysis (SW 720).** Course emphasizes the effect of social problems, policies, and programs on people and gives students the skills to analyze the effectiveness of policies and programs.

**Human Behavior in the Social Environment (SW 730).** Theoretical underpinnings essential for effective social work practice and for understanding the behavior of individuals, families, groups, and communities.

**Social Work Research (SW 740).** Course offers students the opportunity to become informed consumers of social-work-relevant research and to develop skill in evaluating the effectiveness of their own work with clients and the effectiveness of the programs in which they work.

**Field Practicum (SW 701).** Community agencies throughout Kansas and western Missouri offer practicum opportunities for the application of knowledge gained in other sequences. Field experiences for foundation-level students extend the curriculum goal of generalist social work and are designed so that fundamental skills across multiple levels of intervention are acquired.

**Foundation Courses.** The following courses are required (32 credit hours):

- **Semester 1 (16 credit hours):**
  - SW 701 Basic Field Practicum .................................................................. 7
  - SW 710 Social Work Practice I ................................................................. 3
  - SW 711 Social Work Practice II ............................................................... 3
  - SW 720 Social Policy and Program Analysis .......................................... 3

- **Semester 2 (16 credit hours):**
  - SW 701 Basic Field Practicum .................................................................. 7
  - SW 711 Social Work Practice II ............................................................... 3
  - SW 730 Human Behavior in the Social Environment ................................ 3
  - SW 740 Social Work Research .................................................................. 3

**M.S.W. Advanced-Level Curriculum**

Students at the advanced level select a concentration in either clinical social work practice or social work administrative and advocacy practice. This selection is based on their goals of working directly with individuals, families, and groups or at the macro-level of practice in advocacy and community practice. Students may not enroll in advanced-level classes before completing foundation requirements.

**Clinical Social Work Concentration (32 credit hours).** This concentration prepares students for social work practice with individuals, families, and small groups. The focus of the student’s academic preparation is twofold: on developing the assessment skills needed to identify the client’s personal, interpersonal, environmental and/or systems needs; and on selecting, in concert with the client, appropriate interventions that are evidence-based and supported as best practices. Students are exposed to social work theories and methods applicable to the range of practice settings in which clinical social work services are provided; they simultaneously have the opportunity to apply this developing knowledge in the field education component of their graduate programs. Students who anticipate seeking the Licensed Specialist Clinical Social Worker (LSCSW) examination should enroll in the clinical social work practice concentration.

**Semester 3**

- SW 801 Advanced Field Practicum: Clinical Practice ........................................ 7
- SW 810 Clinical Social Work Practice ................................................................ 3
- Integrative Seminar ......................................................................................... 3

  *Students must select an integrative seminar that complements the advanced field practicum. Courses include SW 830 Social Work in Child and Family Settings, SW 831 Social Work in Health Care and Mental Health Settings, and SW 833 Social Work and Aging.*

**Diversity Selective ........................................................................................................ 3

  *This cluster of courses is organized around understanding diversity and applying that understanding to specific populations of people who have been marginalized and oppressed.*

**Semester 4**

- SW 801 Advanced Field Practicum: Clinical Practice ........................................ 7
- SW 811 Topics in Advanced Clinical Social Work: (Clinical Practice Selective) This selection of offerings emphasizes application of advanced theoretical and practice principles to client systems ................................................................. 3
- Clinical Practice Electives .................................................................................. 6

  *The clinical practice electives offer students an opportunity to acquire in-depth knowledge in a core area of clinical social work practice. (For students expecting to sit for the LSCSW license in the future, at least one of the clinical electives must meet the BSRB requirement for diagnosis and treatment. Those interested in school social work should take SW 834 as one of their elective courses.)*

**Social Work Administrative and Advocacy Practice Concentration (32 credit hours).** The social work administrative and advocacy practice curriculum prepares graduates for management or academic positions in public and voluntary human services organizations. The concentration helps students achieve competence in managerial and advocacy practice grounded in the knowledge and values of social work. Knowledge and skill areas include program design, managing information, managing people, managing resources, community advocacy, and program evaluation. This concentration prepares students to be program managers, supervisors, agency administrators, program monitors,
advocates and evaluators, and social planners with voluntary health and welfare planning agencies; federal, state, and local planning bodies; and advocacy and self-help organizations.

**Semester 3**
- SW 804 Advanced Field Practicum: Social Work Administration ................. 7
- SW 840 Social Program Design and Management ........................................ 3
- SW 841 Advanced Policy and Programs ..................................................... 3

**Semester 4**
- SW 804 Advanced Field Practicum: Social Work Administration ................. 7
- SW 842 Using Outcomes for Administrative and Advocacy Practice ............ 3
- SW 843 Strengthening Staff Performance in a Diverse Workplace ............... 3
- Advanced Administrative Practice Selective .............................................. 3

This selective extends and deepens students’ skills and knowledge in administrative practice and expands their expertise in client-centered change at the community and organizational level.

**Field Practicum**
The field education office works with community agencies throughout Kansas and western Missouri to provide field education opportunities for students. Students are placed in these agencies through a collaborative process between the office, the student, and the community agency. The field education office is responsible for ensuring that all field placements are able to provide the appropriate learning opportunities for students and that qualified field instructors are available to the student. The field education office arranges all placements.

Students have two practicum placements, one during the foundation level and one during the advanced level of the program. Each placement is for two consecutive semesters, 14 credit hours per year. Foundation-level students engage in practicum for 20 hours a week, for a two-semester period of 30 weeks for a minimum of 600 clock hours. Advanced-level students spend 24 hours a week in practicum for a two-semester period for a minimum of 720 clock hours. In both years, the practicum is concurrent with required practice courses.

Practicum is graded on an S/U basis. A satisfactory (S) grade in both the foundation and advanced-level practicum is a requirement for the M.S.W. degree. At the end of the first semester, a grade of P is given for satisfactory progress toward completion of the course. No credit is given for partial completion (fewer than 14 credit hours) of either practicum.

The foundation-level practicum provides the necessary learning opportunities for the achievement of foundation curriculum objectives and development of a generalist perspective on practice. Advanced-level practicum provides the learning opportunities essential for completing the objectives of either the clinical or social work administrative and advocacy concentrations. Clinical concentration practica are linked to integrative seminars in the following fields of practice: children and families, health/mental health, or aging.

An orientation is held in the fall, before the beginning of classes, for all students entering a field practicum and the field liaisons who represent the school. The *Field Education Handbook* explains practicum-related expectations and policies. Students are responsible for the material in the handbook.

Every student in practicum has both an M.S.W. practicum instructor and a field liaison. The practicum instructor is responsible for designating learning opportunities, planning practicum assignments, and serving as the student’s teacher in the practicum. The field liaison is employed by the School of Social Welfare to work with practicum instructors and students in each agency, to help integrate practicum and class instruction, to evaluate student performance, and to assist if difficulties arise.

Field placements are mainly in the Kansas City, Topeka, and Wichita areas, with a limited number of settings in Lawrence, Leavenworth, and other Kansas and Missouri communities. Most agencies also require a student to have transportation available for agency assignments. Students are responsible for transportation to the assigned field practicum.

Because of the necessity for continuity in both client service and learning, the maximum time for a break between semesters is three weeks, regardless of time allowable according to the university calendar.

**Field Practicum Alternative Plans**

**Concurrent Practicum Exception.** A student applies for a concurrent practicum exception through the director of field education. To qualify for a concurrent practicum exception, a student must be at the M.S.W. level and working in a social service agency that offers work experience the student can draw upon during the Practicum class. A concurrent practicum exception, when approved by the M.S.W. program director, allows the student to opt out of practicum until a later time (usually during the summer — summer block). The student still completes the three required courses. As part of the application for a concurrent practicum exception, a student must identify his or her plan for completing the required practicum hours.

**Summer Block Practicum.** When a student has had a concurrent practicum exception approved by the M.S.W. program director, the student makes arrangements to complete the full required practicum hours during the summer. The student is assigned 40 hours a week in the practicum for 15 weeks. Essentially, a student typically must be able to quit daytime employment and be available 40 hours a week for practicum (this cannot be an employment-based practicum).

**Employment-Based Practicum (EBP).** Most students are placed in a regular practicum setting by the field education office. A small number of students consider applying for an EBP, in which students use their current place of employment (but not their job) as the site for the field practicum. The student’s employment agency must be able to show that it will reduce the student’s regular work responsibilities and reassign the student to new responsibilities (typically a different unit, client population, etc.) for practicum hours. The student’s practicum responsibilities must be very different from his or her work responsibilities (a student would still essentially be working full time, but half of it would be the current job and the other half—practicum—would be in a different unit with different job responsibilities).

The same educational requirements and standards apply to an EBP as to other regular practicum placements. The employing agency must agree to support the educational program and the Council on Social Work Education standards.

**Prior Work Experience.** In accordance with national curriculum policy, prior employment and life experience may not be credited toward classroom course work or practicum requirements.

**Credit for Course Work Taken Outside the School of Social Welfare**

Clinical students who wish to substitute a course taken outside the School of Social Welfare for a clinical elective must petition the clinical committee before the beginning of the semester (for fall, August 1; for spring, December 15). Petitions must include the course syllabus, verification that the course is a graduate course, and a transcript upon completing the course showing a grade of B or higher. Requests submitted after the beginning of the semester will not be considered. Students who choose field placements that require particular course work are responsible for meeting the academic requirements of the school as well as the field agency. No more than 3 hours of course work taken outside the school will be accepted to meet the elective program requirement.

Social work administrative and advocacy practice students interested in taking a course offered outside the program must con-
Joint Degree in Social Work and Law

The Juris Doctor/Master of Social Work joint degree program combines into four years of study the three-year J.D. program offered by the School of Law and the two-year M.S.W. degree offered by the School of Social Welfare. The social work practitioner gains an understanding of the legal environment in which he or she works and its impact on social problems. The legal practitioner learns how social problems shape the law. Applicants must apply to and meet the criteria for admission to both schools. Contact each school for separate admission information.

School Social Work

The Kansas Department of Education no longer certifies school social workers. However, the School of Social Welfare strongly recommends that students interested in practicing in a school setting take the following:

- A practicum experience at the advanced level in a public school setting under the direct supervision of a school social worker.
- Clinical social work concentration.
- SW 830 Social Work in Child and Family Settings.
- SW 834 Social Work in Schools as one clinical elective.
- SPED 725 is highly recommended as an elective choice for students planning a future in school social work.

Doctor of Philosophy

Challenging ideas and creative thinking are happening at KU’s School of Social Welfare, which is consistently ranked in the top 10 public university programs. Our doctoral program prepares students to be leaders of the profession through their advanced research, scholarship, and teaching. Our school is known internationally as a prime innovator in the Strengths Perspective for social work practice. Doctoral students have played a key role in this exciting initiative.

Program Highlights

- Creative, critical thinking about practice, policy, and theory
- Quantitative and qualitative skills for research
- Innovative scholarship and teaching
- Student-centered educational approach
- Financial support and mentoring for students
- Full- and part-time enrollment options
- Personal and community strengths
- Appreciation for human diversity and global perspective
- Social justice

Our students become conversant with the excitement and creativity in the profession — how professionals come to know what they know, how they put that knowledge into practice, and how it affects consumers.

Graduate social work education has been offered at KU for more than 50 years, longer than any other institution in the state.

See our website, www.socwel.ku.edu, or write to The University of Kansas School of Social Welfare, Doctoral Program, Twente Hall, 1545 Lilac Lane, Room 107, Lawrence, KS 66045-3129, admissionsw-phd@ku.edu, or contact program director Chris Petr at admissionsw-phd@ku.edu.
Curriculum
Our courses prepare students as scholars with conceptual and methodological sophistication.

- History and philosophy courses focus on the intellectual history, current status, and innovation of social work ideas, ideologies, and theories.
- In the research sequence, students learn both qualitative and quantitative methodologies, designs, advanced modes of analysis, and appropriate applications.
- The policy/practice courses provide the opportunity to analyze policies of interest to the student and discover “best” practices as they affect a population. Students critically consider human problems, strengths, and strategies for change and transformation.
- Qualifying papers and electives help students develop deep understanding in areas of special interest.
- Seminars on teaching enable students to be effective educators.
- The dissertation involves advanced and focused research into a topic selected by the student, based on quantitative, qualitative, historical, or other methods of inquiry.

Ph.D. Admission
Qualifications for Admission. To be considered for admission, an applicant must meet these requirements:
1. Minimum 3.5 graduate grade-point average.
2. M.S.W. degree preferred. Applicants with master’s degrees related to social work and affiliation with social work activities and values are considered.
3. Completion of the Graduate Record Examination within the past five years. Scores in at least the 50th percentile in two of the three test areas are preferred.
4. Basic statistical competence as demonstrated by completion of a basic statistics course at the graduate or undergraduate level with a grade of B or above within the last two years, or plan to complete the course.
5. Two years of social work or related practice; two years of post-master’s professional social work experience preferred.
6. Ability for doctoral study in social work, demonstrated by a written statement of interests in research relevant to social work and half time appointment as a teaching or research assistant.
7. Demonstrated ability for and interest in advanced scholarship and revision of existing bodies of knowledge.
8. For international students, completion of the Test of English as a Foreign Language within the past two years, demonstrating high proficiency.
9. Other general KU requirements.

Application Timeline
Applications are not reviewed until all materials are received. The deadline is February 1. Late applications are considered only on a space-available basis. For specific admission requirements, see our website or write to

The University of Kansas
School of Social Welfare, Doctoral Program
Twente Hall, 1545 Lilac Lane, Room 107
Lawrence, KS 66045-3129

Telephone: (785) 864-8976
Doctoral Director: Chris Petr, (785) 864-8963
E-mail: admissionsso-phd@ku.edu
website: www.socwel.ku.edu/Academics/PHD
Online graduate application www.grauate.ku.edu

Teaching and Research
Our Ph.D. program contributes significantly to the model of strengths and community-based research, service, and education developed by the school. Under the direction of faculty members, many Ph.D. students help with research projects and serve as teaching assistants or as field instructors. For example, doctoral research assistants work in such areas as aging, child welfare, criminal justice, diversity issues, domestic violence, health and disability, mental health, social policy, and spirituality.

It is part of the school’s mission to focus on teaching, inquiry, and practice that benefit populations who experience oppression of all kinds. The school is committed to diversity and multicultural perspectives. Many of the research and service projects of faculty members and doctoral students are committed to direct and positive impact on people of color, status minorities, and oppressed peoples, individually, collectively, and internationally.

Ph.D. Degree Requirements
The program requires a minimum of 54 credit hours. This total includes 24 hours of required courses, 12 hours of electives, qualifying papers, a comprehensive examination process, and the dissertation. In fulfilling the elective hours, students may take graduate-level courses in any substantive area or research skills necessary for successful completion of their goals. Students can fulfill this requirement by taking electives in social science or other relevant graduate disciplines. Before students are certified as eligible for candidate status, they must complete course requirements, qualifying papers, and a dissertation proposal.

Commuting for one or two days per week is possible. Required course work can be completed in two years. Additional time is needed to complete the qualifying papers and dissertation. The program can be completed in four years of focused work. Students may start on a part-time basis but eventually must spend one year in residence, which entails two semesters of full-time course work (9 hours) and may include one summer session (6 hours); or a combination of 6 hours of course work and half time appointment as a teaching or research assistant for two semesters.

Doctoral Courses (54 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 979</td>
<td>Methods of Naturalistic and Qualitative Research</td>
</tr>
<tr>
<td>SW 980</td>
<td>History and Philosophy I</td>
</tr>
<tr>
<td>SW 981</td>
<td>Advanced Research Methods I</td>
</tr>
<tr>
<td>SW 982</td>
<td>Social Policy Analysis</td>
</tr>
<tr>
<td>SW 983</td>
<td>Advanced Research Methods II</td>
</tr>
<tr>
<td>SW 984</td>
<td>Social Work Practice</td>
</tr>
<tr>
<td>SW 985</td>
<td>History and Philosophy II</td>
</tr>
<tr>
<td>SW 986</td>
<td>Research Practicum</td>
</tr>
</tbody>
</table>

Substantive electives (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 999</td>
<td>Dissertation</td>
</tr>
</tbody>
</table>

Tuition and Fees
For current information about tuition and fees, see www.registrar.ku.edu/fees. Rates are subject to change at any time by the Kansas Board of Regents. All students also pay required campus fees. Students in social work courses pay additional course fees. See www.registrar.ku.edu/fees for more information.

To be eligible for resident rates, a student must have been a resident of Kansas at least one year before matriculation or hold an appointment as a teaching or research assistant. Rates are set by the Kansas Board of Regents and are subject to change. Information is available from the KU Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 151, Lawrence, KS 66045-7518, (785) 864-4422. See www.tuition.ku.edu or www.registrar.ku.edu/fees for current rates.

A nonrefundable application fee is required.
Financial Aid

For financial assistance for all program locations, apply to the University of Kansas, Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence KS 66045-7518, (785)864-4700, financialaid@ku.edu. Financial aid for Lawrence and Kansas City is processed through the Lawrence campus office.

The Free Application for Federal Student Aid must be filed for you to be eligible for loan and grant programs administered by KU. The FAFSA is available online at http://www.fafsa.ed.gov. Start the process early, before you know your admission status.

A small number of advanced-level field practicum placements may pay a stipend to students. Effort is made to assign these settings to students whose financial need is high.

For Ph.D. students, financial assistance, including tuition and significant salary, is available from the school through teaching and research assistantships in research and training areas such as adult and children’s mental health, aging, child welfare, corrections, social policy, spiritual diversity, or other areas of faculty grants and interests. Because of more than $6 million dollars in research grants, most of our doctoral students are able to obtain funding. To apply for financial support, you should indicate on the application form and submit the application early. Apply by November 15 for fellowship consideration.

Scholarships and Awards

Scholarships are awarded to advanced-level M.S.W. students from the following funds established with KU Endowment:

- Aase George Scholarships
- Dot Simmons and Dodie Abbot Scholarships
- Esther Twente Scholarships
- Mildred Webb Sigler Scholarship
- School of Social Welfare Advisory Board Scholarships
- And others

Awards for outstanding field practicum performance are given annually in recognition of Margaret Schutz Gordon, Director of Practicum, 1970-1983.

William and Monte Murphy Fellowships are available based on need. William Palm Fellowships are available based on need to students of underrepresented ethnic groups. Students must be in good academic standing. The FAFSA must be filed as part of the application process.

International Students

All students from abroad, including students from English-speaking countries, must visit KU’s Applied English Center for verification of English language skills. You may be required to take an English Language Proficiency Test and to enroll in English language courses if you do not pass that test.

Note: The need to take English courses may delay your start in or extend the length of the M.S.W. program.

If you are accepted to the M.S.W. program, your admission to the School of Social Welfare is provisional. You must visit the KU International Student and Scholar Services Office, Strong Hall, 1450 Jayhawk Blvd., Room 2, Lawrence, KS 66045-7518, iss@ku.edu, for your I-20 documentation. You must also visit the Applied English Center, Lippincott Hall, 1410 Jayhawk Blvd., Room 204, Lawrence, KS 66045-7537, 785-864-4700, financialaid@ku.edu. Financial aid for Lawrence and Kansas City is processed through the Lawrence campus office.

The International Conference on Social Welfare recommends that before seeking professional education for social work in the United States, a student should complete comparable study available in his or her own country and acquire a minimum of two years of social work experience there.

International students also must submit:

1. Original bank statements showing evidence of your and/or your sponsor’s financial ability to pay for your educational and living expenses. Adequate health insurance coverage also is required.

2. Evidence of having taken the Test of English as a Foreign Language (TOEFL) examination within the past two years. Minimum scores are subject to change. Please visit the application area of our website for the latest minimum scores.

3. One official, original-language copy of your academic records with a certified English translation.

Social Welfare Courses

SW 701 Basic Field Practicum (4-14). Students are assigned to social service agencies that provide generalist practice opportunities that prepare students for entry in an advanced level in either clinical social work practice or social work administration. Students work under the supervision of a qualified field instructor when they have the opportunity to apply and test social work knowledge, values, and skills. This course is generally taken for two semesters, with credit being given only after completion of the second semester. Open only to first-level M.S.W. students. Enrollment must be concurrent with enrollment in SW 710 and SW 711.

SW 710 Social Work Practice I (3). The first of two-course sequence prepares students to begin to translate theory into strategies of intervention that cut across social work practice with all sized systems. Presents an integrating framework of practice that supports the strengths perspective and a person-in-environment frame of reference. Course taken concurrently with SW 711 which provides students an opportunity to integrate theory and practice in work with clients.

SW 711 Social Work Practice II (3). Second of two-course sequence extends the work begun in SW 710. Focus in the second course is on mastery of the basics of helping relationships and the development of intervention skills for the middle and ending phases of intervention. Content is structured to prepare students to enter the advanced level of the M.S.W. program. Course taken concurrent with SW 701. Prerequisite: SW 710. LEC.

SW 712 Social Work Practice Seminar (3). Introduces advanced standing students to the themes of the school. Special emphasis is given to the Strengths Perspective, a multicultural approach to practice, and developing the skills to critically and reflectively think about one’s own practice. Advanced standing status required. LEC.

SW 713 Community and Organizational Practice (3). Students will be exposed to a body of knowledge and skills necessary to practice with communities and organizations. An advocacy perspective will act as the course’s unifying theme with client well-being acting as the driving force behind the activities of community and organizational practitioners. LEC.

SW 720 Social Policy and Program Analysis (3). This course provides a broad social context for identifying and analyzing social problems and social policy/prorgrams. Economic and social injustice policies are compared and contrasted with programs and policies. LEC.

SW 730 Human Behavior in the Social Environment (3). Course provides foundation knowledge about the science of behavior and social processes. Theoretical perspectives on well being, dysfunction, and developmental processes are analyzed critically, especially concerning applicability to social work practice that supports client strengths, diversity, and social justice. A holistic conceptual framework is used to integrate these micro-system perspectives with larger environmental socio-political concerns. LEC.

SW 740 Social Work Research (3). An examination of professionally relevant aspects of the nature of science; the nature of knowing, a constructed reality: the logic of explanation and inquiry, the nature of concepts, hypotheses, and assumptions. The content will include such issues as sampling, measurement reliability and validity, developing survey questions, types of qualitative and quantitative research, and an introduction to descriptive and inferential statistics. LEC.

KU’s Master of Social Work program is ranked 11th in the nation, according to U.S. News & World Report’s “America’s Best Graduate Schools” rankings for 2009.

KU’s Edwards Campus is at 12600 Quivira Road, Overland Park, KS 66213-2402, phone (from Lawrence): 864-8400 or (913) 897-8400, http://edwardscampus.ku.edu.

Scholarships made possible through donations to KU Endowment are available to M.S.W. students.
SW 755 Studies: (1-3). This course provides the opportunity for experimentation with innovative course content in accordance with guidelines established by faculty. Subjects offered as topics include Social Work with AIDS, Family Mediation, Family Violence.LEC

SW 801 Advanced Field Practicum: Clinical Practice (7-14). Students are assigned to social service agencies that provide opportunities for advanced level clinical social work practice. All students work under the supervision of a qualified field instructor where they have the opportunity to integrate theory and practice and develop beginning competence in clinical social work practice. This course is generally taken for two semesters, with credit being given only after completion of the second semester. Open only to Advanced-level M.S.W. students. Enrollment must be concurrent with enrollment in SW 810 and SW 811. Prerequisite: Completion of all foundation requirements. LEC

SW 804 Advanced Field Practicum: Social Work Administration (7-14). Students are assigned to social service agencies that provide practice opportunities in social work administration. All students work under the supervision of a qualified field instructor where they have the opportunity to develop beginning competence in social work administration. This course is generally taken for two semesters, with credit being given only after completion of the second semester. Open only to Advanced-level M.S.W. students. Enrollment in fall semester must be concurrent with enrollment in SW 840, SW 841, and SW 849 and in Spring semester enrollment must be concurrent with enrollment in SW 842, and SW 843. Prerequisite: Completion of all foundation requirements. LEC

SW 810 Clinical Social Work Practice (3). Clinical social work practice occurs in a variety of settings, from large public and private agencies and institutions through many types of individual and group private practice situations. This course is designed to teach advanced knowledge and skills that transcend contextual factors in order to produce a variety of positive client outcomes in a range of practice situations. In addition, this course focuses on the commitment of social work practitioners to provide services to those groups who, by reason of class, race, sex, or other characteristics, are not ordinarily well served by the many institutions in this society. Course taken concurrently with SW 801 which provides an opportunity to integrate theory and practice in work with clients. Prerequisite: Completion of all foundation requirements. LEC

SW 811 Topics in Advanced Clinical Social Work: (3). The organizing theme of the advanced clinical selective emphasizes application of advanced theoretical and practice principles to client systems. This advanced selective provides students with the opportunity to critically consider the themes of the school as they relate to the development of assessment, diagnostic, and process evaluations with a variety of client systems. Every student will engage in activities designed to solidify their professional identity as clinical practitioners as they enter the workforce. Topics offered may include strengths-oriented, solution-focused brief therapy; narrative; family therapy; social work practice and families. Prerequisite: Completion of SW 810. LEC

SW 830 Social Work in Child and Family Settings (3). An in-depth examination of social work in child and family settings. Students demonstrate the capacity to integrate research, policy, direct practice, and human behavior in considering the issues central to this area of practice. Students will also be able to explain how diversity issues manifest themselves at both the policy and direct practice levels. Prerequisite: Completion of all foundation requirements. LEC

SW 832 Social Work in Health Care and Mental Health Settings (3). Content as in SW 830 focused on health care and mental health. LEC

SW 833 Social Work and Aging (3). Content as in SW 830 focused on aging. LEC

SW 834 Social Work in Schools (3). Content as in SW 830 focused on schools. LEC

SW 840 Social Program Design and Management (3). Introduction to client-centered human service management, including the variety of tasks, roles, and functions of managers. Majority of the course content is covered in social programs within a specific analytic framework. Prerequisite: Completion of all foundation requirements. LEC

SW 841 Advanced Policy and Programs (3). The focus is on the development of skills to stay abreast of and knowledgeable about critical federal and state policies, regulations, and funding structures and streams in students’ chosen field of practice. Students will also learn how to research the literature on best practice and effective programs. All of these skills and consequential knowledge will be used to inform program design, resource acquisition, financial management, personnel management, outcome management, and other administrative functions. Prerequisite: Completion of all foundation requirements. LEC

SW 842 Using Outcomes for Administrative and Advocacy Practice (3). Emphasis is on the use of information to improve human service system performance. Includes content for the design, implementation, and evaluation of information systems. Prerequisite: Completion of all foundation requirements. LEC

SW 843 Strengthening Staff Performance in a Diverse Workplace (3). Builds knowledge and skills in effective supervision of social workers. Emphasis will be placed on maximizing client and community well-being by increasing job satisfaction, enhancing staff morale, and creating and maintaining workplaces that reflect, contribute to, and celebrate diversity in the larger community. Prerequisites: Completion of all foundation requirements. LEC

SW 844 Facilitating Organizational and Community Change (3). Focus on the development and practice of strategies to influence agencies and programs to be client centered; identify client centered program enhancements, plan change efforts, and practice inter-personnel strategies to implement changes. Prerequisite: Completion of all foundation requirements. LEC

SW 846 Advanced Community and Advocacy Practice (3). This course is designed to build on the content of the foundation course on community and organizational practice by further developing the theories, methods, and skills of community and advocacy practice. This course will help students know and further develop the analytical and empirical skills needed to effectively manage and advocate with and on behalf of different human service communities. Throughout the course, skill-building exercises are presented to aid in understanding conceptual theories. Prerequisite: Completion of all foundation requirements. LEC

SW 847 Grantwriting and Fundraising (3). This course is designed to acquaint students with the knowledge and skills necessary for human service programs to acquire resources through grantwriting and fundraising. Focus is on prospect research for public and private funding, the preparation of a fundable grant proposal, and other fundraising techniques used by agencies to support their client-centered mission. Prerequisite: Completion of foundation requirements. LEC

SW 848 Mastering the Use of Financial Records for Social Work Practices (3). Focus on the use of resources needed to operate a client centered program. Includes budgeting techniques and their application; use of budgets for decision making; and problems of reallocation. Prerequisite: Completion of all foundation requirements. LEC

SW 853 Social Work with Groups (3). The focus is on the development of group work skills and knowledge necessary for workers to manage groups. Prerequisite: Completion of SW 810. LEC

SW 855 Studies: (1-3). Course provides opportunity for experimentation with innovative content in accordance with guidelines established by faculty. Topics include Spiritual Aspects of Practice, Intrafamilial Sexual Abuse, and other timely subject areas. LEC

SW 860 Loss and Grief (3). Examines the multiple faces of loss and grief throughout the human life cycle. Examines personal and societal attitudes toward death and dying and the processes of grief and mourning. Course includes exploration of assessment, intervention, and evaluation of how to assist families to cope with loss. Prerequisite: Completion of all foundation requirements. LEC

SW 862 Intrafamilial Sexual Abuse (3). This course will focus on sexual misuse that occurs within the family system. Students will obtain a comprehensive understanding of sexual misuse that occurs within the family system and develop assessment and helping skills needed when working with abusive families. Theoretical, assessment, and helping aspects of intrafamilial sexual abuse will be examined. Prerequisite: Completion of all foundation requirements. LEC

SW 863 Mental Health and Psychopathology (3). Theories of mental health and psychopathology are compared with respect to etiology, classification, assessment, and treatment of distress and mental disorders. Theories and practices are evaluated critically for their usefulness in strengths approach to social work in mental health settings. Prerequisite: Completion of SW 862. LEC

SW 866 Social Work Practice with Children and Adolescents (3). Developmental norms and processes in childhood and adolescence and related implications for assessment and intervention methods in work with children and adolescents. Topics include countertransference issues in working with children, working with parents of children, interventions methods in childhood and adolescent issues, and concerns in adolescence, sexual abuse of children. Prerequisite: Completion of all foundation requirements. LEC

SW 868 Crisis Intervention (3). Principles of planned short-term intervention generally and of crisis intervention specifically are presented. Empirical evidence bearing on crisis theory and outcomes of crisis intervention are examined. Anticipated and unanticipated crises, including disaster, are considered as they affect individuals, families, or larger groups. Prerequisite: Completion of all foundation requirements. LEC

SW 869 Social Work with Clients with Alcohol and Drug-Related Problems (3). Focus is on developing value consciousness and multidimensional understandings in relation to drug use and abuse. Patterns of drug use, sociocultural attitudes toward drug use and deleterious issues in the drug field will be examined. Explanatory theories and contemporary interventions, including the applicability of generalist social work practice models are presented and critically assessed. Prerequisite: Completion of all foundation requirements. LEC

SW 870 Spiritual Aspects of Social Work Practice (3). This course provides a framework of knowledge, values, and skills for spiritually-sensitive social work practice. In order to prepare students to respond competently and ethically to diverse spiritual per...
Social Welfare Courses

SW 872 Cultural Diversity in Social Work Practice (3). Provides students with a framework of knowledge, values, and practice methodology for culturally competent social work practice. Emphasizes themes of oppression and empowerment, culture-specific strengths and resources, and multicultural/transcultural perspectives. Prerequisite: Completion of all foundation requirements. LEC

SW 873 Social Work with Gay, Lesbian, Transgendered, and Bi-Sexual Clients (3). The purpose of this course is to introduce students to the basic knowledge, values, and skills needed to work effectively with people who are gay, lesbian, and bisexual. The course will reflect a person-environment perspective, focusing on strategies that empower lesbians, gay men, and bisexuals to develop personal and environmental resources from a strengths perspective. Throughout the course, attention will be given to issues of diversity within the lesbian and gay population. Prerequisite: Completion of all foundation requirements. LEC

SW 874 Social Work Practice with Women (3). Expands knowledge and practice skills in working with women in diverse social work practice settings. Critical examination of traditional and feminist practice approaches to problems that frequently confront women. Prerequisite: Completion of foundation requirements. LEC

SW 875 Readings and Investigations: _____ (1-3). Opportunity for scholarly investigation in an area of special interest. Students pursue independent study in an area of social work practice through the guidance of a selected faculty member. RSH

SW 876 Social Work with African American Families (3). The purpose of this course is to introduce students to the basic knowledge, values, and skills needed to work effectively with African American clients and their families. Critical examination of issues such as racism, oppression, and the historical context and their impact on African American families. Prerequisite: Completion of all foundation requirements. LEC

SW 877 Current Issues in Professional Social Work Education: _____ (0.5-3). Course provides opportunity for innovative course content designed for the social work professional. Subjects offered include: Psychopathology; A Biopsychosocial Approach, Ethics and the Social Worker, Mediation, Solution Focused Practice, Strengths-based Management, Outcome-based Measurement of Practice. LEC

SW 895 Doctoral Studies: _____ (1-3). This course provides the opportunity for exploration of innovative content under the guidance of Ph.D. faculty. LEC

SW 897 Methods of Naturalistic and Qualitative Research (3). Introduces the concept of different methods for different questions - the distinction between quantitative and qualitative approaches and methods in the analysis of qualitative data: focus group interviews, key informant interviews, participant observation methods, test and content analysis, the use of archival data, and unobtrusive behavioral observation. LEC

SW 980 History and Philosophy I (3). Provides an educational structure in which various aspects of the problem of interest can be intensively explored. Students survey current state of the art in area of interest and develop a written prospectus on a question suitable for dissertation research. LEC

SW 981 Advanced Research Methods I (3). Develops a sophisticated understanding of the research process, including the process of question formulation, choices among research strategies, and technical standards of research design. Includes a one hour lab. Prerequisite: Basic course in statistics. LEC

SW 982 Social Policy Analysis (3). Focus is on social policy analysis and critique; development of an understanding of legal issues related to social policy and historical development; development of the skills and appreciations that foster analysis, critique and comparisons. LEC

SW 983 Advanced Research Methods II (3). Advanced statistical and methodological techniques including higher order analysis of variances, regression analysis, nonparametric techniques, and further development of computer skills. LEC

SW 984 Social Work Practice (3). How to use and integrate methods of inquiry and research to discover the current state of practice within a specific area of students’ interests; evaluate and critique the current state of the art and reconceptualize best practices in terms of program development and evaluation. LEC

SW 985 History and Philosophy II (3). Provides an educational structure for the refinement of dissertation proposals through class presentation and critique. Specific techniques and alternatives in studying a variety of dissertation questions are compared. LEC

SW 986 Research Practicum (3). Provides a field research experience designed to explore a specific area of research interest using quantitative and/or qualitative methods. LEC

SW 990 Graduate Research (1-9). Individual research preparatory to defense of dissertation prospectus. (By arrangement with doctoral chair) RSH

SW 998 Doctoral Applied Research and Education Studies (1). This course provides the opportunity for doctoral students to learn about research or teaching through direct application of research or teaching skills under the mentorship of faculty. RSH

SW 999 Dissertation (1-12). THE
ments, 245-246; developmental, 247-248; educative, 88, 109-110; health & rehabilitation, 248; quantitative, 246-247; school, 88, 115-110; social, 246
Psychology & acoustics of music laboratory, 298
Psychology & research in education, 88, 107-114
Psychology licensure, 167
Public administration, 10, 14, 16, 22, 70, 156, 253-256; admission, 253-254; combined degrees, 14, 17, 205, 254; courses, 255-256; degree requirements, 253-254; fields of study, 254, 255; master of, 14, 15, 205, 255; Ph.D., 16, 253, 254-255; specialization, 255
Public health master, of, 15, 16, 187, 290-296, 316; preventive medicine & 16, 16, 17, 280, 292-296
Public health nursing, 317; certificate, 17
Public management center, KU, 22, 253
Public policy, 241
Public relations, 150-151
Publication, dissertation submission &, 21, 92, 95, 156
Pure mathematics, 231
Qualifications for admission, 12-13, 154, 342
Qualifying examination, 129, 196, 281, 288 (see individual programs)
Quantitative psychology, 246-247
Radar systems & remote sensing, 137
Radio-television-film & media studies; see Journalism & mass communications, school of)
Rainer Maria Rilke collection, 210, 211
Readmission after five years’ absence, 13, 19, 24
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)
Readings, college of)