Graduate School Dean Diana Carlin leads a graduate seminar in political communication.
Administration

The Kansas Board of Regents
Richard L. Bond (term ends June 2006), Overland Park
Janice B. DeBauge (term ends June 2003), Emporia
William R. Docking (term ends June 2005),
Arkansas City
Lewis L. Ferguson (term ends June 2005), Topeka
James R. Grier III (term ends June 2006), Wichita
Fred Kerr (term ends June 2003), Pratt
Donna L. Shank (term ends June 2006), Liberal
Jack R. Wempe (term ends June 2003), Lyons
Deryl W. Wynn (term ends June 2005), Kansas City, Kan.
Reginald Robinson, President and CEO
1000 S.W. Jackson St., Suite 520
Topeka, KS 66612-1368
Telephone: (785) 296-3421, Fax: (785) 296-0983
www.kansasregents.org

The University of Kansas

Administration
Robert Hemenway, Chancellor
Donald F. Hagen, Executive Vice Chancellor, Medical Center
Janet Murguia, Executive Vice Chancellor for University Relations
David E. Shulenburger, Executive Vice Chancellor and Provost, Lawrence campus
Barbara Atkinson, Vice Chancellor for Clinical Affairs, Medical Center
Randy Attwood, Director of University Relations, Medical Center
William Barkman, Chief of Staff, Medical Center
Robert E. Barnhill, Vice Provost for Research and President and COO, Center for Research, Inc., Lawrence campus
James Bingham, Associate Vice Chancellor for Academic Resources, Medical Center
Lynn Bretz, Director of University Relations, Lawrence campus
Robert M. Clark, Vice Chancellor, Edwards Campus
Warren Corman, University Architect and Special Assistant to the Chancellor
Irene M. Cumming, Chief Executive Officer, KU Med
William L. (Lindy) Eakin, Vice Provost for Administration and Finance, Lawrence campus
Sandra Gautt, Vice Provost for Faculty Development, Lawrence campus
Marilu Goodyear, Vice Provost for Information Services, Lawrence campus
Theresa K. Klinkenberg, Chief Business and Financial Planning Officer, Lawrence campus
James Long, Vice Provost for Facilities Planning and Management, Lawrence campus
Kathleen McCluskey-Fawcett, Senior Vice Provost, Academic Affairs, Lawrence campus
Dennis Moss, University Director of Internal Audit
Lew Perkins, Director of Athletics
Edward Phillips, Vice Chancellor for Administration, Medical Center
James Pottorf Jr., University General Counsel
Marlesa A. Roney, Vice Provost for Student Success
JoAnn Smith, Vice Provost for University Outreach
Donald W. Steeple, Vice Provost for Scholarly Support, Lawrence campus
Deborah J. Teeter, University Director of Institutional Research and Planning

The Graduate School

Administration
Diana B. Carlin, Dean of the Graduate School and International Programs
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535, (785) 864-6161
Allen Rawitch, Vice Chancellor for Academic Affairs and Dean of Graduate Studies, 5015 Wescoe Pavilion, Mail Stop 1040, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1258

Schools with Degree Programs in the Graduate School
Allied Health. Karen L. Miller, Dean
Architecture and Urban Design. John C. Gaunt, Dean
Business. William Fuerst, Dean
Surendra Singh, Director of the Doctoral Program
Douglas Houston, Director of M.B.A. Programs
Education. Angela Lumpkin, Dean
Fred Rodriguez, Associate Dean for Academic Programs
Engineering. Stuart Bell, Dean
Glen Marotz, Associate Dean for Research and Graduate Programs
Fine Arts. Steven K. Hedden, Dean
Lois Greene, Associate Dean for Graduate Studies
Journalism and Mass Communications. James K. Gentry, Dean
John Broholm, Graduate Director
The Graduate School Administration; Distinguished & Teaching Professors

Liberal Arts and Sciences. Kim A. Wilcox, Dean
John Gronbeck-Tedesco, Associate Dean

Medicine. Barbara Atkinson, Executive Dean

Nursing. Karen L. Miller, Dean
Helen Connors, Associate Dean, Academic Affairs

Pharmacy. Jack E. Fincham, Dean
Elizabeth Topp, Director of Graduate Studies

Social Welfare. Ann Weick, Dean
Edward Canda, Director, Doctoral Program

Distinguished and Teaching Professors

(February 2003)

Lawrence Campus

Robert Antonio, Chancellors Club Teaching Professor of Sociology

William A. Barnett, Charles W. Oswald Distinguished Professor of Economics

Timothy A. Bengtson, Clyde and Betty Reed Teaching Associate Professor of Journalism

David Bergeron, Esther Conger Gabel and M. Wren Gabel Teaching Professor of English

George Bittlingmayer, Wagnon Distinguished Professor of Business

Ronald T. Borchardt, Summerfield Distinguished Professor of Pharmaceutical Chemistry

Daryle H. Busch, Roy A. Roberts Distinguished Professor of Chemistry

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

Jose Sequeira Costa, Cordelia B. Murphy Distinguished Professor of Piano

David Darwin, Deane E. Ackers Distinguished Professor of Civil, Environmental, and Architectural Engineering

Deepak Datta, William and Judy Docking Teaching Professor of Business

Michael J. Davis, Centennial Teaching Professor of Law

Andrew P. Debicki, University Distinguished Professor of Spanish and Portuguese

Richard T. De George, University Distinguished Professor of Philosophy

Amy Devitt, Esther Conger Gabel and M. Wren Gabel Teaching Professor of English

Martin B. Dickinson Jr., Robert A. Schroeder Distinguished Professor of Law

Charles C. Eldredge, Hall Family Foundation Distinguished Professor of History of Art

Stephen B. Fawcett, Kansas Health Foundation Distinguished Professor of Human Development and Family Life

Donald Fixico, Thomas M. Bowlus Distinguished Professor of American Indian History

N. Allen Ford, Larry D. Horner/KPMG Peat Marwick Teaching Professor of Accounting

H. George Frederickson, Edwin O. Stene Distinguished Professor of Government

Victor S. Frost, Dan E. Servey Distinguished Professor of Electrical Engineering and Computer Science

Gunda I. Georg, University Distinguished Professor of Medicinal Chemistry

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

James M. Higdon Jr., Dane and Polly Bales Teaching Professor of Organ

N. Ray Hiner, Chancellors Club Teaching Professor of History and Teaching and Leadership

Michael H. Hoeflich, John H. and John M. Kane Distinguished Professor of Law

David Holmes, Chancellors Club Teaching Professor of Psychology

Craig L. Huneke, Henry J. Bischoff Distinguished Professor of Mathematics

Dennis E. Karney, Ned N. Fleming Teaching Professor of Business

Susan Kemper, Roy A. Roberts Distinguished Professor of Psychology

Chuan-Tau E. Lan, J.L. Constant Distinguished Professor of Aerospace Engineering

Dennis D. Lane, N.T. Veatch Distinguished Professor of Civil, Environmental, and Architectural Engineering

Wojciech Lesnikowski, Don Hatch Distinguished Professor of Architecture

V. Parker Lessig, Frank S. Pinet Teaching Professor of Business

Paul Stephen Lim, Esther Conger Gabel and M. Wren Gabel Teaching Professor of English

Kenneth D. Mackenzie, Edmund P. Learned Distinguished Professor of Business

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

Elia 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
Distinguished & Teaching Professors

Richard S. Musser Jr., Clyde M. Reed Teaching Professor of Journalism
Joane P. Nagel, University Distinguished Professor of Sociology
Allan H. Pasco, Hall Family Foundation Distinguished Professor of French and Italian
John C. Peck, Connell Teaching Professor in Kansas Law
David W. Petz, John and Winifred Sharp Teaching Professor of Electrical Engineering and Computer Science
Dennis D. Prater, Connell Teaching Professor in Kansas Law
Mabel L. Rice, Fred and Virginia Merrill Distinguished Professor of Advanced Studies
Stanley T. Rolfe, Albert P. Learned Distinguished Professor of Civil, Environmental, and Architectural Engineering
Jan Roskam, Deane E. Ackers Distinguished Professor of Aerospace Engineering
Elinor P. Schroeder, Paul E. Wilson Distinguished Professor of Law
Timothy L. Shaftel, Jordan L. Haines Teaching Professor of Business
K. Sam Shanmugan, Southwestern Bell Distinguished Professor of Electrical Engineering and Computer Science
Sidney Shapiro, John Rounds Distinguished Professor of Law
Prakash P. Shenoy, Ronald G. Harper Distinguished Professor of Business
Roger Y. Shimomura, University Distinguished Professor of Art
Surendra Singh, Southwestern Bell Teaching Professor of Business
Charles R. Snyder, M. Erik Wright Distinguished Professor of Psychology
Rajendra Srivastava, Ernst and Young Teaching Professor of Business
Donald W. Steeples, Dean A. McGee Distinguished Professor of Geology
Valentino Stella, University Distinguished Professor of Pharmaceutical Chemistry
Bala Subramaniam, Dan F. Survey Distinguished Professor of Chemical and Petroleum Engineering
Karan S. Surana, Deane E. Ackers Distinguished Professor of Mechanical Engineering
Ray R. Taghavi, John and Winifred Sharp Teaching Professor of Aerospace Engineering
Thomas N. Taylor, Roy A. Roberts Distinguished Professor of Ecology and Evolutionary Biology
W. Randall Van Schmus, Union Pacific Distinguished Professor of Geology
Fred S. Van Vleck, Chancellors Club Teaching Professor of Mathematics
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
Norman R. Yetman, Chancellors Club Teaching Professor of American Studies and Sociology
Po-Lung Yu, Carl A. Scupin Distinguished Professor of Business

KU Medical Center Campus

Susan E. Carlson, Midland Dairy Council Professor of Nutrition
James D. Cook, L.E. and Lenora Carr Phillips Distinguished Professor of Medicine
S. Edwards Dismuke, Kansas Health Foundation Distinguished Professor of Public Health
Thomas D. DuBose, Peter T. Bohan Professor of Medicine
John A. Ferraro, Carolyn Doughty–Margaret Kemp Professor of Hearing and Speech
Jared J. Grantham, University Distinguished Professor of Internal Medicine
Douglas V. Horbelt, Daniel K. Roberts Distinguished Professor of Obstetrics and Gynecology
Joan S. Hunt, University Distinguished Professor of Anatomy and Cell Biology
Joseph L. Kyner, Chancellors Club Teaching Professor of Internal Medicine
Barbara P. Lukert, Mary F. Roberts Distinguished Professor of Nutrition
Norman L. Martin, Endowment Distinguished Professor and Chancellors Club Teaching Professor of Radiology
William V. McKnely Jr., Lyle L. and Vivian L. Woodfin Psychiatric Professor
Opendra Narayan, Marion Merrell Dow Distinguished Professor of Microbiology, Molecular Genetics and Immunology
Robert N. Schimke, Chancellors Club Teaching Professor of Internal Medicine
### 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, Fine Arts</td>
<td>ACMP</td>
<td>173</td>
</tr>
<tr>
<td>Accounting, Business</td>
<td>ACCT</td>
<td>91</td>
</tr>
<tr>
<td>Advanced Design Studies, Fine Arts</td>
<td>ADS</td>
<td>168</td>
</tr>
<tr>
<td>Aerospace Engineering, Engineering</td>
<td>AE</td>
<td>139</td>
</tr>
<tr>
<td>African &amp; African-American Studies, Liberal Arts &amp; Sciences</td>
<td>AAAS</td>
<td>198</td>
</tr>
<tr>
<td>American Studies, Liberal Arts &amp; Sciences</td>
<td>AMS</td>
<td>200</td>
</tr>
<tr>
<td>Anatomy &amp; Cell Biology, Medicine</td>
<td>ANAT</td>
<td>318</td>
</tr>
<tr>
<td>Anthropology, Liberal Arts &amp; Sciences</td>
<td>ANTH</td>
<td>202</td>
</tr>
<tr>
<td>Architectural Engineering, Engineering</td>
<td>ARCE</td>
<td>147</td>
</tr>
<tr>
<td>Architecture, Architecture &amp; Urban Design</td>
<td>ARCH</td>
<td>75</td>
</tr>
<tr>
<td>Art, Fine Arts</td>
<td>ART</td>
<td>167</td>
</tr>
<tr>
<td>Astronomy, Liberal Arts &amp; Sciences</td>
<td>ASTR</td>
<td>289</td>
</tr>
<tr>
<td>Atmospheric Science, Liberal Arts &amp; Sciences</td>
<td>ATMO</td>
<td>289</td>
</tr>
<tr>
<td>Audiology, Allied Health</td>
<td>AUD</td>
<td>58</td>
</tr>
<tr>
<td>Band, Fine Arts</td>
<td>BAND</td>
<td>179</td>
</tr>
<tr>
<td>Bassoon, Fine Arts</td>
<td>BASN</td>
<td>175</td>
</tr>
<tr>
<td>Biochemistry &amp; Molecular Biology, Medicine</td>
<td>BCHM</td>
<td>320</td>
</tr>
<tr>
<td>Biological Sciences, Liberal Arts &amp; Sciences</td>
<td>BIOL</td>
<td>210</td>
</tr>
<tr>
<td>Biometry, Allied Health</td>
<td>BMTR</td>
<td>57</td>
</tr>
<tr>
<td>Brass, Fine Arts</td>
<td>BRSS</td>
<td>173</td>
</tr>
<tr>
<td>Business, Business</td>
<td>BUS</td>
<td>91</td>
</tr>
<tr>
<td>Business Law, Business</td>
<td>BLAW</td>
<td>98</td>
</tr>
<tr>
<td>Carillon, Fine Arts</td>
<td>CARI</td>
<td>174</td>
</tr>
<tr>
<td>Ceramics, Fine Arts</td>
<td>CER</td>
<td>168</td>
</tr>
<tr>
<td>Chamber Music, Fine Arts</td>
<td>CHAM</td>
<td>174</td>
</tr>
<tr>
<td>Chemical &amp; Petroleum Engineering, Engineering</td>
<td>C&amp;PE</td>
<td>144</td>
</tr>
<tr>
<td>Chemistry, Liberal Arts &amp; Sciences</td>
<td>CHEM</td>
<td>215</td>
</tr>
<tr>
<td>Chinese, Liberal Arts &amp; Sciences</td>
<td>CHIN</td>
<td>227</td>
</tr>
<tr>
<td>Choral Music, Fine Arts</td>
<td>CHOR</td>
<td>179</td>
</tr>
<tr>
<td>Church Music, Fine Arts</td>
<td>CHUR</td>
<td>173</td>
</tr>
<tr>
<td>Civil Engineering, Engineering</td>
<td>CE</td>
<td>148</td>
</tr>
<tr>
<td>Clarinet, Fine Arts</td>
<td>CLAR</td>
<td>175</td>
</tr>
<tr>
<td>Classics, Liberal Arts &amp; Sciences</td>
<td>CLSX</td>
<td>219</td>
</tr>
<tr>
<td>Clinical Laboratory Sciences, Allied Health</td>
<td>CLLS</td>
<td>57</td>
</tr>
<tr>
<td>Communication Studies, Liberal Arts &amp; Sciences</td>
<td>COMS</td>
<td>221</td>
</tr>
<tr>
<td>Conducting, Fine Arts</td>
<td>COND</td>
<td>179</td>
</tr>
<tr>
<td>Croatian &amp; Serbian, Liberal Arts &amp; Sciences</td>
<td>CRSB</td>
<td>303</td>
</tr>
<tr>
<td>Czech, Liberal Arts &amp; Sciences</td>
<td>CZCH</td>
<td>303</td>
</tr>
<tr>
<td>Dance, Fine Arts</td>
<td>DANC</td>
<td>171</td>
</tr>
<tr>
<td>Decision Sciences, Business</td>
<td>DSCI</td>
<td>98</td>
</tr>
<tr>
<td>Dietetics &amp; Nutrition, Allied Health</td>
<td>D&amp;N, DIET</td>
<td>59</td>
</tr>
<tr>
<td>Double Bass, Fine Arts</td>
<td>DBBS</td>
<td>174</td>
</tr>
<tr>
<td>Drawing, Fine Arts</td>
<td>DRWG</td>
<td>167</td>
</tr>
<tr>
<td>East Asian Languages &amp; Cultures, Liberal Arts &amp; Sciences</td>
<td>EALC</td>
<td>227</td>
</tr>
<tr>
<td>Name, College or School</td>
<td>Abbr.</td>
<td>Page</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Metalsmitting/Jewelry, Fine Arts</td>
<td>METL</td>
<td>160</td>
</tr>
<tr>
<td>Microbiology, Molecular Genetics,</td>
<td>MICR</td>
<td>324</td>
</tr>
<tr>
<td>Immunology, Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular &amp; Integrative Physiology,</td>
<td>PHSL</td>
<td>326</td>
</tr>
<tr>
<td>Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Museum Studies, Liberal Arts</td>
<td>MUSE</td>
<td>282</td>
</tr>
<tr>
<td>Music, Fine Arts</td>
<td>MUS</td>
<td>171</td>
</tr>
<tr>
<td>Music Education &amp; Music Therapy,</td>
<td>MEMT</td>
<td>180</td>
</tr>
<tr>
<td>Fine Arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music Theory &amp; Composition, Fine Arts</td>
<td>MTHC</td>
<td>177</td>
</tr>
<tr>
<td>Musicology, Fine Arts</td>
<td>MUSC</td>
<td>178</td>
</tr>
<tr>
<td>Neurosciences, Pharmacy</td>
<td>NURO</td>
<td>354</td>
</tr>
<tr>
<td>Nurse Anesthesia, Allied Health</td>
<td>NURA</td>
<td>61</td>
</tr>
<tr>
<td>Nursing, Nursing</td>
<td>NRSG</td>
<td>339</td>
</tr>
<tr>
<td>Oboe, Fine Arts</td>
<td>OBOE</td>
<td>176</td>
</tr>
<tr>
<td>Occupational Therapy, Allied Health</td>
<td>OCTH</td>
<td>65</td>
</tr>
<tr>
<td>Orchestra, Fine Arts</td>
<td>ORCH</td>
<td>179</td>
</tr>
<tr>
<td>Organ, Fine Arts</td>
<td>ORGN</td>
<td>174</td>
</tr>
<tr>
<td>Painting, Fine Arts</td>
<td>PNTG</td>
<td>167</td>
</tr>
<tr>
<td>Pathology &amp; Laboratory Medicine,</td>
<td>P&amp;O</td>
<td>327</td>
</tr>
<tr>
<td>Medicine</td>
<td>PCUS</td>
<td>176</td>
</tr>
<tr>
<td>Percussion, Fine Arts</td>
<td>PENS</td>
<td>179</td>
</tr>
<tr>
<td>Percussion Ensemble, Fine Arts</td>
<td>PHCH</td>
<td>356</td>
</tr>
<tr>
<td>Pharmaceutical Chemistry, Pharmacy</td>
<td>PHCL</td>
<td>328</td>
</tr>
<tr>
<td>Pharmacology, Medicine</td>
<td>P&amp;TX</td>
<td>357</td>
</tr>
<tr>
<td>Pharmacy Practice, Pharmacy</td>
<td>PHPR</td>
<td>349</td>
</tr>
<tr>
<td>Philosophy, Liberal Arts &amp; Sciences</td>
<td>PHIL</td>
<td>285</td>
</tr>
<tr>
<td>Physical Therapy, Allied Health</td>
<td>PHTH</td>
<td>67</td>
</tr>
<tr>
<td>Physics, Liberal Arts &amp; Sciences</td>
<td>PHSX</td>
<td>289</td>
</tr>
<tr>
<td>Physiology, Molecular &amp; Integrative, Medicine</td>
<td>PHSX</td>
<td>308</td>
</tr>
<tr>
<td>Piano, Fine Arts</td>
<td>PIAN</td>
<td>174</td>
</tr>
<tr>
<td>Polish, Liberal Arts &amp; Sciences</td>
<td>PLSH</td>
<td>303</td>
</tr>
<tr>
<td>Political Science, Liberal Arts &amp; Sciences</td>
<td>POLS</td>
<td>248</td>
</tr>
<tr>
<td>Preventive Medicine &amp; Public Health, Medicine</td>
<td>P&amp;O</td>
<td>327</td>
</tr>
<tr>
<td>Printmaking, Fine Arts</td>
<td>PRVM</td>
<td>331</td>
</tr>
<tr>
<td>Psychology, Liberal Arts &amp; Sciences</td>
<td>PRNT</td>
<td>167</td>
</tr>
<tr>
<td>Psychology &amp; Research in Education,</td>
<td>PSYC</td>
<td>293</td>
</tr>
<tr>
<td>Education</td>
<td>PRE</td>
<td>118</td>
</tr>
<tr>
<td>Public Administration, Liberal Arts &amp; Sciences</td>
<td>PUAD</td>
<td>253</td>
</tr>
<tr>
<td>Religious Studies, Liberal Arts &amp; Sciences</td>
<td>REL</td>
<td>299</td>
</tr>
<tr>
<td>Russian, Liberal Arts &amp; Sciences</td>
<td>RUSS</td>
<td>303</td>
</tr>
<tr>
<td>Russian &amp; East European Studies,</td>
<td>REES</td>
<td>301</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>SAXO</td>
<td>176</td>
</tr>
<tr>
<td>Saxophone, Fine Arts</td>
<td>SCAN</td>
<td>245</td>
</tr>
<tr>
<td>Scandinavian, Liberal Arts &amp; Sciences</td>
<td>SCUL</td>
<td>167</td>
</tr>
<tr>
<td>Sculpture, Fine Arts</td>
<td>SLAV</td>
<td>303</td>
</tr>
<tr>
<td>Slavic Languages &amp; Literatures,</td>
<td>SW</td>
<td>366</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>SOC</td>
<td>306</td>
</tr>
<tr>
<td>Social Welfare, Social Welfare</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociology, Liberal Arts &amp; Sciences</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tables of Contents

A complete Table of Contents for each chapter of this catalog appears on the right-hand page before the chapter begins. The page numbers in the following table are those of each chapter’s Table of Contents.

### Contents

- General Information ........................................ 9
- The Graduate School and International Programs ........ 35
- Research at the University of Kansas .................... 43
- School of Allied Health .................................... 55
- School of Architecture and Urban Design ................ 71
- School of Business .......................................... 83
- School of Education ........................................ 99
- School of Engineering ...................................... 135
- School of Fine Arts ........................................ 163
- School of Journalism and Mass Communications ........ 187
- College of Liberal Arts and Sciences .................... 193
- School of Dentistry ......................................... 315
- School of Nursing .......................................... 335
- School of Pharmacy ........................................ 347
- School of Social Welfare .................................. 359
- Graduate Faculty ........................................... 369
- Index .................................................................. 381
- Campus Maps .................................................. 390
**Graduate School Calendar**

**Fall Semester 2003**
See [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable) for enrollment dates.

**August 21**
Classes begin.

**September 1**
Labor Day. No classes.

*Check with individual Graduate Divisions* for the last day for May 2004 doctoral aspirants to take comprehensive oral examinations.

**October 23**
Fall break begins.

**October 27**
Classes resume.

**November 26**
Recess begins.

**December 1**
Classes resume.

*Check with individual Graduate Divisions* for the last day for December 2003 master’s and doctoral candidates to take final examinations.

**December 11**
Last day of classes.

**December 15-19**
Final examinations.

**December 19**
Last day for December 2003 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 2004 commencement).

**Spring Semester 2004**
See [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable) for enrollment dates.

**January 23**
Classes begin.

*Check with individual Graduate Divisions* for the last day for August 2004 doctoral aspirants to take comprehensive oral examinations.

**February 14**
Last day to file applications for Graduate School fellowships in the Graduate School.

**March 22**
Spring recess begins.

**March 29**
Classes resume.

*Check with individual Graduate Divisions* for the last date for May 2004 master’s and doctoral candidates to take final examinations.

**May 5**
Last day for May 2004 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 13**
Last day of classes.

**May 17-21**
Final examinations.

**May 22**
Doctoral hooding ceremony (tentative date).

**May 23**
Commencement (tentative date).

**Summer Session 2004**
See [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable) for enrollment dates.

**June 8**
Classes begin.

*Check with individual Graduate Divisions* for the last date for December 2004 doctoral aspirants to take comprehensive oral examinations.

*Check with individual Graduate Divisions* for the last date for August 2004 master’s and doctoral candidates to take final examinations.

**July 30**
Last day for August 2004 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 2005 commencement).

**Fall Semester 2004**
See [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable) for enrollment dates.

**August 19**
Classes begin.

**September 6**
Labor Day. No classes.

*Check with individual Graduate Divisions* for the last date for May 2005 doctoral aspirants to take comprehensive oral examinations.

**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 2004 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 2004 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 2005 commencement).
**Spring Semester 2005**

See [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable) for enrollment dates.

**January 20**
Classes begin.

*Check with individual Graduate Divisions* for the last date for August 2005 doctoral aspirants to take comprehensive oral examinations.

**February 16**
Last day to file applications for Graduate School fellowships in the Graduate School

**March 21**
Spring recess begins.

**March 28**
Classes resume.

*Check with individual Graduate Divisions* for the last date for May 2005 master’s and doctoral candidates to take final examinations.

**May 4**
Last day for May 2005 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** (tentative date)
Commencement.

**Summer Session 2005**

See [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable) for enrollment dates.

**June 7**
Classes begin.

*Check with individual Graduate Divisions* for the last date for December 2005 doctoral aspirants to take comprehensive oral examinations.

*Check with individual Graduate Divisions* for the last date for August 2005 master’s and doctoral candidates to take final examinations.

**July 29**
Last day for August 2005 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 2006 commencement).

*These dates vary among the schools. Consult the Graduate Division of your school for the correct date.**

**Dates shown are subject to change. See the online Timetable, [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable), for specific dates.**

KU’s academic calendars are online at [www.registrar.ku.edu/calendar](http://www.registrar.ku.edu/calendar).

---

**The Office of Student Support** publishes a Referral Guide each year. It provides information about KU policies and procedures. Much of this information is also online at [www.ku.edu/~handbook](http://www.ku.edu/~handbook), [www.ku.edu/~provost](http://www.ku.edu/~provost), and [www.registrar.ku.edu](http://www.registrar.ku.edu).
The University of Kansas Edwards Campus ........................................ 34
KU Medical Center Services .................................................. 34
Lawrence Services ..................................................................... 34
Housing .................................................................................. 34
Health Services ........................................................................ 34
Graduate Student Associations ................................................ 31
Other Employment Opportunities ............................................. 31

General Regulations ................................................................ 25
Course Numbering System ....................................................... 25
Credit by Examination ............................................................ 25
Credit by Transfer ..................................................................... 25
Enrollment ................................................................................. 25
Grading ..................................................................................... 25
Probation .................................................................................. 26
Graduate Credit ......................................................................... 26
Grievances ............................................................................... 26
Intellectual Property Policy ...................................................... 27
Language Requirements .......................................................... 27
Leave of Absence (Doctoral Students) ....................................... 27
School, Division, & Level Codes ................................................. 27
Seniors & Graduate Study (Coenrollment) .................................. 27
Special Conditions for Specified Types of Research ................. 27
Student Responsibilities ............................................................ 28
Time Limit on Graduate Courses .............................................. 28
Undergraduate Student Enrollment ......................................... 28
University Faculty & Advanced Degrees ................................... 28
Withdrawal from a Course ......................................................... 28
Withdrawal from the University ............................................... 28

Tuition & Fees ......................................................................... 28
Late Enrollment Fee .................................................................. 28
Engineering Fee ....................................................................... 28
Master's-level Business Fee ..................................................... 28
Mediated Course Fee ................................................................ 28
Pharmacy Fee .......................................................................... 28
Payment of Tuition & Fees ....................................................... 29
Residency Requirements ........................................................... 29
Books & Supplies ..................................................................... 29
Reciprocal Agreements ............................................................ 29

Financial Aid .......................................................................... 29
Loans ....................................................................................... 29
Tuition Payment ......................................................................... 29
Graduate Assistantships ............................................................ 29
Graduate Teaching Assistantships ............................................ 29
Graduate Research Assistantships ........................................... 30
Summer Session Enrollment Requirements ............................. 30
Health Insurance ...................................................................... 30
Non-native Speakers of English ............................................... 30
Other Employment Opportunities .......................................... 31

Student Services ...................................................................... 31
Graduate Student Associations ............................................... 31
Health Services ....................................................................... 31
Housing ................................................................................... 31
Lawrence Services ................................................................. 31
KU Medical Center Services ................................................... 34
The University of Kansas Edwards Campus .............................. 34
The University of Kansas opened its doors to its first eager but scantily prepared students in 1866, progressed rapidly to full undergraduate and beginning graduate-level work, and in 1896 organized its Graduate School and awarded its first doctoral degree, a Ph.D. in mathematics.

Within the Kansas Board of Regents system, the university accounts for about 70 percent of all doctoral study and a large percentage of all other graduate work in the liberal arts and sciences, fine arts, and a number of professional fields.

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. Profiles is available online at www.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 West Campus Rd., Room 339, Lawrence, KS 66045-7505, (785) 864-4412; and the Office of the Provost, Strong Hall, 1450 Jayhawk Blvd., Room 250, Lawrence, KS 66045-7535, (785) 864-4904. On the KU Medical Center campus, write or call the Office of the Executive Vice Chancellor, 2nd floor Murphy Administration Building, Mail Stop 2015, KU Medical Center, 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. KU is the only Kansas Regents university to hold membership in the prestigious Association of American Universities, a select group of 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 KU 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. KU 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; KU Med, the hospital; and Graduate Studies in Kansas City.

The 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.

Nondiscrimination Policy

In accordance with Titles VI and VII of the Civil Rights Act of 1964, the Equal Pay Act of 1963, the Age Discrimination in Employment Act of 1967, Executive Order 11246, Title IX of the Education Amendments of 1972, Section 503 and 504 of the Rehabilitation Act of 1973, The Americans with Disabilities Act, the Vietnam Veterans Readjustment Assistance Act of 1974, the Kansas Acts Against Discrimination and all other applicable civil rights and nondiscrimination statutes, the University of Kansas prohibits discrimination on the basis of race, color, religion, sex, national origin, age, ancestry, disability, and veteran status.

The University of Kansas, Lawrence, is committed to the full participation of previously excluded or neglected classes of people. Thus, it is also the policy of the university to prohibit discrimination on the basis of sexual orientation, marital status, and parental status. The university's nondiscrimination policy extends to employment practices, conditions of employment, personnel actions, and all other educational programs and activities of the university and its affiliates. Reports of discrimination shall be evaluated promptly and acted upon in the manner deemed necessary by the appropriate faculty and administrators and as prescribed by the appropriate grievance procedure. The university is committed to taking affirmative action for protected class citizens and providing equal opportunity in all aspects of education and employment.

The University of Kansas Prohibits Racial and Ethnic Discrimination. The University of Kansas, Lawrence, is committed to programs and activities that are free of racial or ethnic discrimination. To carry out the mission of this institution, the university community must provide and
maintain a working and learning environment that fosters respect among all members of the community. The university’s goal is to provide an environment where individuals are free to develop intellectually, personally, professionally, and socially without intimidation or fear. Intimidation and harassment affect not only those who suffer the harassment, but also the entire community.

The University of Kansas prohibits Sexual Harassment. The University of Kansas, Lawrence, is committed to providing an academic and employment environment that will foster respect among all members of the university community. The university is also committed to assuring that its programs and activities are free of discrimination on the basis of gender. The university strives through education and the cooperation of all members of the university community to provide a working and learning environment that is free of gender discrimination and sexual harassment. Sexual harassment violates the trust and respect that is essential for providing a positive working and educational environment.

Full texts of the University Policy on Nondiscrimination and the Policies Prohibiting Sexual Harassment and Racial and Ethnic Discrimination are available at www.ku.edu/~equalop. Inquiries regarding university policies on discrimination, racial and ethnic harassment, sexual harassment, equal opportunity, and affirmative action on the Lawrence campus may be made to Danielle Dempsey-Swopes, Interim Director, Equal Opportunity Office, Strong Hall, 1450 Jayhawk Blvd., Room 313, Lawrence, KS 66045-7535, (785) 864-3686, www.ku.edu/~equalop. For inquiries regarding discrimination or harassment on the KU Medical Center campus, contact Jayne Owen, Director, Equal Opportunity Office, 1040 Wescoe, KU Medical Center, Mail Stop 2014, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1206 (voice), (913) 588-7963 (TDD), www.kumc.edu/eeo.

The University Communities

Lawrence

KU’s main campus is in Lawrence, Kansas, a youthful, thriving community with a population of about 80,000. The campus is in the heart of the city on a ridge called Mount Oread. The city itself has a long history, predating KU’s 137 years. It began as a small outpost on the banks of the Kansas River and retains many interesting reminders of its colorful past. The tree-lined main street just a few blocks from campus has an abundance of small specialty shops, many of which cater to student needs and interests. Other shopping centers are nearby.

The community has 32 public parks covering about 1,400 acres of land, three community swimming pools, an arts center, a historical museum, a public library, a community center, and active community education and recreation programs. Lawrence ranked ninth in the nation among smaller metro areas on the 2002 Forbes/Milken Best Places for Business and Careers list.

In addition to KU’s music and theatre 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 areas for children and adults, as well as gallery shows. Local galleries sponsor art exhibits. The 1,000-acre Lawrence campus has 100 major buildings.

Joseph R. Pearson Hall, home of the School of Education, was rededicated in 2001. A $14.1-million renovation and construction project transformed the former residence hall into a student-centered academic building. A new computer laboratory, an instructional technology center, and a 100-seat lecture hall feature state-of-the-art educational technology.

The $10.3-million Murphy Hall addition, completed in fall 2000, brought music education and music therapy from Bailey Hall to Murphy. The 52,000-square-foot addition houses three rehearsal halls, the Thomas Gorton Music and Dance Library, and the Kansas Center for Music Technology.

Hilltop Child Development Center moved to a new home in 2000. The new $3.3-million, 18,000-square-foot Child Care Center on Irving Hill Road offers care to 212 children of KU students and employees.

Margaret Amini Scholarship Hall was dedicated in 2000. KU alumni Koli “K.K.” and Margaret Amini provided $1.5 million for construction of the 16,000-square-foot building, KU’s 10th scholarship hall and the fifth for women. Another new KU scholarship hall for women, funded by a $3 million gift from Roger and Annette Riegler, is scheduled to open in fall 2005.

In March 2002, KU broke ground on a new $15-million engineering building. The $2,000-square-foot structure will feature a 230-seat, state-of-the-art lecture hall and is the largest construction project funded entirely through private gifts on KU’s Lawrence campus since the Lied Center, which opened in 1993.

The $11 million, 28,000-square-foot Robert J. Dole Institute of Politics was dedicated in 2003. It houses Senator Dole’s papers and features a 3,300-square-foot public forum, a 120-seat seminar room/media center, KU’s first satellite uplink, and extensive exhibits.

KU has educational, research, and service centers throughout Kansas. There is a clinical campus of the School of Medicine in Wichita and a program in Topeka, the state capital, in public administration. KU’s Institute for Life Span Studies has facilities in Parsons and Kansas City, as well as in Lawrence.

Kansas City and the Medical Center

The KU Medical Center and an estimated one-and-a-half million people call Kansas City home. 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 Kansas City’s jazz museum, the Nelson-Atkins Museum of Art, the Kansas City Art Institute, Union Station, Science City, and the Kansas City Museum of History and Science. Entertainment in Kansas City ranges from theme parks, golf courses, tennis courts, and the Kansas City Zoo to international cuisine, dinner theatre, and dancing. Local businesses offer diverse shopping in downtown areas, Farmers’ Market, Country Club Plaza, Crown Center, and Westport Square. The Arts Fest, the Kansas City Jazz Festival, the Ethnic Enrichment Festival, and the Renaissance Festival are popular events. Sports fans enjoy NASCAR racing, Kansas City Royals baseball, and Chiefs football. The Kansas City Symphony, Lyric Opera, Starlight Theatre, Midland Center for the Performing Arts, Folly Theatre, Theatre for Young America, the Coterie, State Ballet of Missouri, Westport Ballet, and local universities and colleges, as well as KU, offer entertainment for music and theatre lovers.
The KU Medical Center began in 1905 with a merger of three proprietary medical schools to form a four-year school directed by the university. Buildings on the original campus were the gift of the late Dr. Simeon B. Bell, a local physician. By 1924, the institution had outgrown its original location, and the first building on the present campus was occupied. The Medical Center is involved with teaching, patient care, medical research, and community service. There are 800 full- and part-time faculty members, more than 2,500 students, and 4,700 employees. The Medical Center is centrally located in the metropolitan Kansas City area. It offers educational programs through the Schools of Allied Health, Medicine, and Nursing, and an Office of Graduate Studies.

Edwards Campus, Overland Park
KU offers full- and part-time graduate programs on the KU Edwards Campus, 12600 Quivira Road, Overland Park, KS 66213-2402. Eighteen master’s programs and one Ed.D. program are available on the Edwards Campus. In fall 2001, the Edwards Campus began implementing undergraduate degree-completion programs. Edwards Campus courses are taught by KU faculty members and carry the same credit as those taught on the Lawrence campus. Tuition is the same for Kansas residents and nonresidents.

For further 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 Support
The University of Kansas is the largest of the Regents institutions in Kansas. Nearly half the Lawrence campus budget and more than a third of the Medical Center budget come from state appropriations. The sources of the remainder of the university budget are gifts, grants, hospital revenues, and fees. KU receives more than $243 million a year for research in science, technology, the social sciences, and humanities.

At the close of the 2002 fiscal year, the Kansas University Endowment Association market value of assets reached $1.02 billion. Among public universities, KU Endowment ranks 18th in size of endowment; 86 percent of KU’s total land holdings are a result of gifts and nonstate grants.

Private gifts have provided, in whole or in part, 105 of the 145 buildings on KU’s campuses, including the original construction and the relocation and renovation of the Burnett Burn Center at the KU Medical Center, the Kansas Health Foundation Center for Primary Care in Wichita, and the construction of the Hoglund Ballpark for KU’s baseball team, and the Horejsi Family Athletics Center for volleyball and basketball on the Lawrence campus.

Throughout its 111-year history, KU Endowment has provided more than $931.1 million in private support of the university through the generosity of its donors. In 2002, more than 9,700 KU students received scholarships, awards, prizes, and loans through KU Endowment totaling more than $27 million. That year, KU Endowment also made available $22.9 million for faculty and staff support and $7.7 million for equipment, book acquisitions, and works of art.

University Service to the State
KU serves the state by providing support for education at all levels, including 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’ work-force needs.

Many service functions are offered through the libraries, museums, and research agencies described in the chapter of this catalog on Research and Academic Support. 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 the other academic units of the university. More than 75,000 Kansans participate each year in continuing education activities.

KU brings to the state a wide 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.

Admission
Persons whose records indicate their ability to succeed with advanced work may be admitted to the Graduate School through the Graduate Division of one of the schools. Admission requires a bachelor’s degree and a grade-point average of at least a B (3.0 on a 4.0 scale), both overall and in the proposed major, from KU or from another nationally 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 that was not directly supervised by faculty members (life experience) 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. The Graduate School reviews the student’s academic background before a student without a bachelor’s degree is admitted. Students who wish to work toward specific, established graduate degrees may be admitted in regular, probationary, or provisional categories. Those who do not have defined degree goals may be admitted in other categories to take advanced work in appropriate areas.

Regardless of the category of initial admission, no student may work toward a graduate degree without being accepted by a specific department or program.

Degree-seeking Students
Regular Graduate Student. The applicant meets the academic standards of the department, Graduate Division, and Graduate School to work for an advanced degree without excessive deficiencies in prerequisites.
Admission

Probationary Graduate Student. An applicant who meets other admission standards may be admitted on probation when his or her undergraduate grade-point average is 2.75 to 3.0 on a 4.0 scale. Upon finishing the equivalent of one semester of full-time graduate study with an average of 3.0 or higher, the student automatically attains regular status. A student admitted on probation who earns a grade-point average lower than 3.0 will not be permitted to re-enroll in the Graduate School except under unusual circumstances. In such cases, the student's department or program may recommend re-enrollment on probation for the equivalent of one more semester of full-time graduate study.

Provisional Graduate Student. An applicant may be admitted as a provisional graduate student when either the quality or kind of undergraduate preparation is deficient, i.e., the undergraduate grade-point average is below 2.75 on a 4.0 scale or the student has not met the prerequisites to do graduate work in the department or program to which he or she has applied. After the equivalent of one semester of full-time study as a provisional graduate student, the department or program in which the student is enrolled reviews his or her performance and recommends that the student be (1) transferred to regular status or (2) dropped from the Graduate School or (3) allowed to continue the equivalent of another semester as a provisional student. It is ordinarily expected that provisional status will not exceed two semesters. The transfer from provisional status is not automatic as it is in the case of probationary status.

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 the Graduate School and the basic science departments without excessive deficiencies in prerequisites. (Same as current Regular Graduate Student 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 Do-all form will change the student's status. (4) At the end of the first academic year, which begins with the first semester of enrollment, the student will retain graduate status if a department has completed a Do-all form or submitted a petition to the Dean of Graduate Studies, KU Medical Center. The dean may extend the Special-B status for one semester or an appropriate period of time.

Nondegree Students

Nondegree A Graduate Student. The applicant is admissible to regular status but does not intend to work for an advanced degree at KU at the time of admission. If a student in the nondegree A category later requests admission as a regular degree-seeking student and is so accepted by a department or program, only that work taken as a nondegree A student which is approved by the appropriate department may be applied to the degree program.

Nondegree C Graduate Student. Students may gain admission to the nondegree C category upon presentation of evidence of receipt of a baccalaureate degree from an institution with requirements for the degree substantially equivalent to those at KU. This category of admission to the Graduate School limits enrollment to continuing education courses, institutes, workshops, or graduate certificate programs. Under special circumstances, however, students in this category may be permitted to enroll in residence credit courses for graduate credit with the consent of the instructor and of the Graduate Division. If students admitted in the nondegree C category are later admitted to a department to work toward a degree, then, within the limitations specified below, applicable courses taken under the nondegree C category may, upon recommendation of the department or program to its Graduate Division and within general guidelines established by the Graduate School, be approved by the division to be counted in the degree program. The total of transfer credit from another accredited graduate school and nondegree C category credit earned at KU may together not exceed 6 hours, or 8 hours if the student holds a baccalaureate degree from KU.

Admission Procedure

Application for admission should be filled with the Graduate School. Since some departments have a limited number of student positions, applications should be submitted as early as possible. To ensure adequate time for review, the applicant should check with each individual degree program for its application deadline date. The application must be accompanied by two copies of official transcripts of all college and university records. Transcripts and test scores that have been faxed will not be accepted as official copies. The schools and departments may require additional application materials such as test scores or letters of recommendation. International applicants must also provide statements of financial resources and English test scores. (See Minimum English Proficiency Requirements.) Application fees are required. Similarly, deposits are required of students admitted to some departments and programs, to be fully credited against required fees upon enrollment.

Application forms are available online at www.graduate.ku.edu or from the major department or the Graduate Division of the appropriate school. At KUMC, contact Graduate Studies, 5015 Wescoe Pavilion, Mail Stop 1040, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1258.

Each applicant is notified by letter and receives an explanation of the admission classification (regular, regular special B, probationary, provisional, nondegree A or C). The enrollment of nondegree A or C graduate students in particular courses, like that of all graduate students, is subject to fulfillment of departmental course prerequisites and consent of the instructor in the case of limitations on class size.

Admission to the Graduate School 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 specified for any 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
Following are the acceptable means of verifying English proficiency for purposes of admitting international students to the Graduate School. These guidelines are subject to change by official action of the appropriate Graduate School governance bodies.

1. Verification that the applicant’s native language is English, as shown to a high degree of probability by citizenship in an English-speaking country such as Great Britain, Australia, New Zealand, or English-speaking provinces in Canada.

2. Graduation with a baccalaureate degree or higher from an accredited U.S. institution of higher education or from such an institution in one of the countries listed above whose medium of instruction is English.

3. Receipt of an institutional copy, not a student’s copy, of the applicant’s Test of English as a Foreign Language scores achieved no more than two years before the semester of admission.

- Paper-based TOEFL—All part scores at least 57; Computer-based TOEFL—All part scores at least 23, Essay at least 4.0: The applicant may be admitted to the Graduate School as a regular graduate student. (Some departments require higher minimum scores.)
- Paper-based TOEFL—All part scores at least 53; Computer-based TOEFL—All part scores at least 20, Essay at least 3.0: The applicant may be admitted to the Graduate School under provisional admission status until he or she has shown satisfactory English proficiency for full-time graduate study as determined by the Applied English Center.
- Paper-based TOEFL—One or more part score(s) below 53; Computer-based TOEFL—One or more part score(s) below 20, Essay below 3.0: Admission is denied, or the admission decision is delayed for one term, and the applicant is advised to apply to and enroll with the Applied English Center. The application may be reconsidered when English proficiency has reached a level satisfactory for full-time graduate study as determined by the Applied English Center.

- Exception: The applicant may be provisionally admitted to the Graduate School if it can be clearly determined that she or he will be able to perform satisfactorily in one or more graduate-level courses during the first term of enrollment at KU. The applicant’s department will identify such course(s) on the Application for Admission. After enrollment, Graduate Division offices verify that the student did indeed enroll in the specified courses, unless it was determined by the Applied English Center that such an enrollment would be beyond the student’s ability. The student remains on provisional admission status until he or she has shown satisfactory English proficiency for full-time graduate study as determined by the Applied English Center.

4. If English test scores other than the TOEFL are offered, the Applied English Center interprets the scores to determine if they are equivalent to the TOEFL scores given above.

All international students who are not native speakers of English must visit the Applied English Center on arrival for verification of their English language proficiency. Additional information that may warrant recommending a waiver from these guidelines may be brought to the attention of the Graduate School by the Graduate Divisions.

All sponsored international students who have been admitted by graduate degree programs may be admitted provisionally to the Graduate School with a postponement of the requirement to submit a TOEFL score.

Upon arrival at KU, the sponsored international student must demonstrate his or her English proficiency by the submission of a TOEFL score or by successfully passing a proficiency examination administered by the Applied English Center at KU. After the sponsored international student’s English proficiency has been verified to meet Graduate School requirements, the status of the sponsored international graduate student may be changed from provisional to regular.

The Graduate School may consider and grant exceptions to the minimum English proficiency requirements on a case-by-case basis.

Degrees
The Graduate School awards degrees 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 on all courses acceptable for graduate credit. A doctoral hooding ceremony is held each May at Commencement for those eligible for the degrees of Doctor of Philosophy, Doctor of Education, Doctor of Engineering, and Doctor of Musical Arts. Only doctoral candidates who have fulfilled all of their degree requirements by the date established by the Graduate School as its deadline for graduation in May will be allowed to participate in the May Doctoral Hooding ceremony.

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

Graduate students may not be awarded 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
The Graduate School grants the traditional Master of Arts and Master of Science degrees as well as 16 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 degrees granted by the Graduate School 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 require at least one year of full-time graduate work or its equivalent and 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 or from the Graduate School.

Professional Master’s Degrees. The Graduate School grants a number of professional master’s degrees, of
Degrees

which all but two are offered through the professional schools. These degrees are Master of Science in Education, Master of Accounting and Information Systems, Master of Architecture, Master of Business Administration, Master of Civil Engineering, Master of Construction Management, Master of Engineering, Master of Fine Arts, Master of Health Services Administration, Master of Human Development, Master of Music, Master of Music Education, Master of Occupational Therapy, Master of Public Administration, Master of Public Health, and Master of Urban Planning. Most require considerably more hours of credit than the M.A. and the M.S., and therefore a longer time, usually a minimum of two academic years, to complete. Consult the chapter pertaining to the appropriate professional school for detailed descriptions of all professional master’s programs.

Exceptions: The Master of Human Development and the Master of Public Administration are administered respectively by the Department of Human Development and Family Life and the Department of Public Administration. Descriptions appear in the College of Liberal Arts and Sciences chapter. The Master of Public Health is administered by the Department of Preventive Medicine and Public Health, and the Master of Health Services Administration is administered by the Department of Health Policy and Management. Both are listed in the School of Medicine chapter.

U.S. News ranks KU 10th among public universities for best value in its price range.

KU is listed among the 299 best buys in college education in Barron’s Best Buys in College Education.

Combined Degrees. The Graduate School, along with KU’s other post-baccalaureate schools, grants several combined degrees 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 economics or in philosophy with J.D.; M.B.A., M.H.S.A., M.P.A., or M.U.P. with J.D.; M.B.A. with Ph.D. in Nursing; M.B.A. with M.H.S.A.; M.P.A. with M.U.P.; M.B.A. with M.A. in Area Studies (Russian and East European Studies or Latin American Studies); M.S. in Nursing with M.H.S.A. or M.P.H.; and M.D. with M.E.; and M.D. with M.H.S.A.

Master’s Degree Programs

The master’s degrees offered by the Graduate School are listed below.

School of Allied Health
Master of Arts
  Audiology
  Speech-Language Pathology
Master of Occupational Therapy
Master of Science
  Dietetics and Nutrition
  Nurse Anesthesia
  Occupational Therapy
  Physical Therapy
School of Architecture and Urban Design
Master of Architecture
Master of Science
  Architectural Engineering (with School of Engineering)
  Master of Urban Planning
School of Business
Master of Accounting and Information Systems
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 and Urban Design)
  Chemical Engineering
  Civil Engineering
  Computer Engineering
  Computer Science
  Electrical Engineering
  Engineering Management
  Environmental Engineering
  Mechanical Engineering
  Petroleum Engineering
  Water Resources Science

School of Fine Arts
Master of Arts
  Visual Arts Education
Master of Fine Arts
  Art
  Design
  Scenography
Master of Music
  Education
  Music Therapy
School of Journalism and Mass Communications
Master of Science
  Journalism
College of Liberal Arts and Sciences
Master of Arts
  American Studies
  Anthropology
  Audiology
  Biochemistry and Biophysics
  Biology (Specialty)
  Botany
  Chemistry
  Child Language
  Classics
  Clinical Child Psychology
  Communication Studies
  East Asian Languages and Cultures
  Economics
  English
  Entomology
  French
  Geography
  Germanic Languages and Literatures
  Gerontology
  History
  History of Art
  Human Development
  Indigenous Nations Studies
  International Studies
  Latin American Studies
  Linguistics
  Mathematics
  Microbiology
  Molecular, Cellular, and Developmental Biology
  Museum Studies
  Philosophy
  Physics
  Political Science
  Psychology
  Religious Studies
  Russian and East European Studies
  Slavic Languages and Literatures
  Sociology
  Spanish
  Speech-Language Pathology
  Theatre and Film
Master of Human Development
Master of Public Administration
Master of Science
  Chemistry
  Geology
  Physics
School of Medicine
Master of Arts
  Anatomy
  Microbiology
  Pathology
  Pharmacology
Master of Health Services Administration
Master of Public Health  
Master of Science  
Biochemistry  
Pharmacology  
Physiology  
Toxicology  
School of Nursing  
Master of Science  
Nursing  
School of Pharmacy  
Master of Science  
Hospital Pharmacy  
Medicinal Chemistry  
Pharmaceutical Chemistry  
Pharmacology and Toxicology

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.

The School of Social Welfare offers and administers the Master of Social Work degree independently of the Graduate School. For a program description, see the School of Social Welfare chapter of this catalog.

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.

Doctoral Degrees
KU's Graduate School offers four doctoral degrees: the Doctor of Philosophy (Ph.D.), Doctor of Education (Ed.D.), Doctor of Engineering (D.E.), and Doctor of Musical Arts (D.M.A.). The programs that offer these degrees are administered by the several schools and colleges through their departments and Graduate Divisions, from admission through final recommendation for degree award through the Graduate School.

General descriptions for each of the doctoral degrees are given here in succinct form to provide convenient comparison of the degrees. More detailed information regarding requirements for each degree as it is offered in specific disciplines should be obtained from the appropriate college, school, or department listing in this catalog. The requirements there are in addition to the general requirements for the degrees that are described in this chapter of the catalog.

Doctor of Philosophy
The degree of Doctor of Philosophy (Ph.D.) is the highest degree offered by the university. It is awarded for mastering a field of scholarship, for learning the methods of investigation appropriate to that field, and for completing a substantial piece of original research. In addition to preparing research specialists, the process of earning a Ph.D. shares certain goals with liberal education: putting order into human experience, fostering a love of learning for its own sake, instilling a respect for human values, integrating various human powers into a process of creation, and making vital, in many fields at least, a sense of history.

Although the courses and 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 Ph.D. aspirant is expected to be a well-educated person with a broad base of general knowledge, not only as preparation for more advanced work but also as a means of knowing how the chosen specialty is related to other fields of human thought.

To give depth and breadth to their doctoral programs, many departments require some work in a minor field or at least an articulated selection of extradepartmental courses. Because of the diversity of the fields in which the Ph.D. is offered and the variety of needs and interests of individual students, the degree does not have a specific requirement for a minor. However, the Ph.D. aspirant is encouraged to plan an integrated program, under departmental direction, that includes courses outside the major field.

Ph.D. with a Major in Special Studies. To accommodate the student whose academic and professional goals require a program embracing several disciplines that cannot be obtained through a single, established program, the Graduate School offers interdisciplinary special studies doctoral programs. To be eligible for admission to such a program, the student must already have demonstrated academic excellence in graduate studies at KU and must present evidence of basic knowledge in each of the involved disciplines.

For specific admission and implementation procedures, see Ph.D. with a Major in Special Studies under Doctoral Degree Requirements in this chapter.

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 a 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), composition, conducting (band, choral, or orchestral), flute, French horn, oboe, organ, percussion, piano, saxophone, strings, trombone, trumpet, tuba, and voice.

Doctoral Degree Programs
The doctoral degrees offered by the Graduate School are listed below.

School of Allied Health  
Doctor of Philosophy  
Audiology  
Rehabilitation Science  
Speech-Language Pathology  
Therapeutic Science  
Doctor of Physical Therapy
Most health sciences programs of the University of Kansas are offered at the KU Medical Center in Kansas City.

KU is one of only 21 public colleges and universities, KU again scores four out of five stars in academics, quality of life and social life.

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 C graduate student. Students may be admitted to the nondegree C category by presenting evidence of receipt of a baccalaureate degree from an institution with degree requirements substantially equivalent to those at KU. Degree-seeking graduate students admitted to a certificate program must be in good standing (3.0 or higher grade-point average) with their departments. 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 established by the Graduate School, be approved by the division to be counted toward the degree.

In fulfilling degree requirements, the total number of graduate hours earned while 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).

As part of the application, a graduate certificate program must set the minimum grade-point average, minimum TOEFL scores, standardized test scores and similar criteria in accordance with Graduate School policies, whether or not certificate courses may be counted toward the related graduate degree program.

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

Collections Conservation, offered through the Museum Studies Program
Dietetic Internship, offered through the Department of Dietetics and Nutrition
Nurse Educator, offered through the School of Nursing
Nurse Midwifery, offered through the School of Nursing
Outcomes Management and Research, an interdisciplinary certificate program administered through the Department of Health Policy
Master's Degree Requirements

This section gives the general and common requirements of the Graduate School for the traditional degrees of Master of Arts and Master of Science. The school and college chapters of this catalog give specific requirements for these degrees in the programs they offer. Schools list requirements for the professional master's degrees they offer. It is the student's responsibility to become thoroughly acquainted with all requirements for the degree, both the general requirements and those that are specific to the student's own department and school.

Program Time Constraints

Master's degree students are allowed seven years for completion of all degree requirements. Normal expectations, however, are that most master's degrees (excluding some professional terminal degrees) should be completed in two years of full-time study. In cases in which compelling reasons or circumstances recommend a one-year extension, the Graduate Division, on recommendation of the department/committee, has authority to grant the extension. In cases where more than eight years are requested, the appropriate appeals body of the school or division considers petitions for further extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant them. Some departments may have more stringent rulings about time restrictions. Students should ask about the policy in effect in the department in which they plan to study.

M.A. and M.S. Degrees

A Master of Arts or a Master of Science degree requires at least one year of graduate work or its equivalent. Stated in terms of hours of credit, the standard master's program requires 30 hours, though some degrees, especially in professional areas, may require as many as 36 or 40 or more. With permission of the department (or in the case of interdepartmental programs, permission of the joint program committee) and of the Graduate Division, it is sometimes possible to complete a 30-hour master's degree with as few as 24 hours if the student enters the program especially well prepared and maintains a superior grade-point average. Work for a master's degree is concentrated 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 Graduate School 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 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. At the option of the department, this 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 and (in thesis programs) 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. In thesis programs, a thesis defense may be a part of the degree requirements. However, such a defense does not take the place of the required general examination in the major field.

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 Graduate School requirements.

Specific information may be obtained from Graduate Division offices or from the Graduate School.
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 (both for the Graduate School and the department involved), but within these limitations, superior students may be able to complete the joint degree program in less time 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.

It is the student’s responsibility to be thoroughly acquainted with all degree requirements, both the general ones and those that are specific to the student’s own department and school.

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 prescribed by the Graduate School 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 department 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. Since the Graduate School does not prescribe a minimum number of hours for the degree, no transfer of credit is appropriate. However, departments take relevant prior graduate work into consideration in setting up programs of study leading to the doctorate.

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 residency requirement. The student must be enrolled in a minimum of 6 credit hours per 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 Graduate School 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 departments 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 can-
3. Research Skills. Specific research skills requirements vary with departments and programs, but all reflect the Graduate School 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, some programs have found it appropriate to regard formal training in ancillary areas as research skills, or within a broad spectrum of skills, to fit research training to the needs of the individual student. 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 FREN 100, GERM 101, ITAL 100, SCAN 101, SLAV 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 departments accept as language competence evidence of having passed the College proficiency examination or 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 his or her 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 major department as important and relevant to the field of study.

As specified by the department, 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 coursework at a level satisfactory to the major department and school and met all other departmental, school, and Graduate School requirements prerequisite to the comprehensive oral examination, including the research skills requirement as appropriately applied and established for the student’s particular program, the department 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 department. At least one member must be from a department other than the aspirant’s major department. This member represents the Graduate School and must be a regular member of the Graduate Faculty. The Graduate School 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 School. 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 department wishes to hold the aspirant responsible. For every scheduled examination, the department reports a grade of Honors, Satisfactory, or Unsatisfactory. If the aspirant receives a grade of Unsatisfactory, the comprehensive oral examination, it may be repeated on the recommendation of the department, 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
Doctoral Degree Requirements

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 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 assure 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 from the Graduate School 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 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, and the examination is followed promptly by submission of the signed dissertation to the Graduate Division, with assurance that all degree requirements have been met.

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 the Graduate School and must be a regular member of the Graduate Faculty. Before the examination, the Graduate Division provides a list of responsibilities to the Graduate School representative. The Graduate School 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 School. The Graduate Division ascer-
tains 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, two unbound copies and an additional abstract (not more than 350 words) 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, either through the customary procedure of publication of the abstract in “Dissertation Abstracts International” and microfilming of the dissertation through University Microfilms or through alternate approved methods for publication. Information on publication procedures may be secured from the Graduate School.

The student must be the author of the dissertation, and every publication from it must naturally 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 inculcation 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 compatible 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. Upon agreement by the professor 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 committee).

(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 to the Graduate School the application for admission to the special studies program. At that time, a review committee is appointed by the Graduate School, chaired by the Dean of the Graduate School (or the Dean's designee) and 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 Graduate Council, at least one of whom must represent a discipline not involved in the special studies program under consideration.

The Graduate School 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 advisor 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 advisor, must make periodic reports to the Graduate School 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 to the Graduate School for review by that office and by the graduate studies office(s) of the in-
volved 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 Graduate School 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 medical students who are qualified to do so may participate concurrently in work leading to the medical degree and the Ph.D. For the Ph.D. degree, a student must complete graduate work equivalent to that requiring at least three academic years in addition to the time spent on the medical curriculum.

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, both of the Graduate School and of the basic medical science department, must be met.

Special Sessions and Programs
Graduate Work in the Summer Session
Graduate students in the summer session are subject to the same scholastic requirements as during the regular academic year. Students desiring graduate credit for summer work must enroll in the Graduate School. Attendance at four summer sessions, each one-half a semester in length, is considered the equivalent of one year for the purpose of satisfying the minimum requirement for a master’s degree.

Extramural (Off-campus) Graduate Study
With the approval of the Graduate Council, 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 Asolo, Italy (business); the U.S. Army Command and General Staff College at Fort Leavenworth (journalism); the KU Public Management Center at Topeka (public administration and civil engineering); 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, 864-8400 or (913) 897-8400. Residence credit courses (education and human development) 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 Mental Retardation Research Center at Parsons State Hospital and Training Center in Parsons, Kansas. These programs are offered by the School of Education, the Department of Human Development and Family Life, and the Inter campus on the KU Medical Center in Parsons, Kansas. These programs are offered by the School of Education, the Department of Human Development and Family Life, and the Inter campus on the KU Medical Center in Parsons, Kansas.

Persons with disabilities can receive assistance from Services for Students with Disabilities, 135 Strong Hall, 1450 Jayhawk Blvd., Lawrence, KS 66045-7535, (785) 864-2620 (Voice/ TTY).

Information and certification services for eligible veterans and their dependents are available in 121 Strong Hall in Lawrence and 3001 Student Center on the KU Medical Center campus.

The Schiefelbusch Institute for Life Span Studies cotributes to the Graduate School of the University of Kansas and the Public Management Center at Topeka (public administration and civil engineering); 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, 864-8400 or (913) 897-8400. Residence credit courses (education and human development) 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 Mental Retardation Research Center at Parsons State Hospital and Training Center in Parsons, Kansas. These programs are offered by the School of Education, the Department of Human Development and Family Life, and the Inter campus on the KU Medical Center in Parsons, Kansas.

Admission. All students who enroll in off-campus graduate study and expect to receive graduate credit must gain admission to KU’s Graduate School through the appropriate program and Graduate Division. If the student is not already admitted, the admission process should preferably be initiated at least six weeks before enrollment, by submission of a completed application form, accompanied by transcripts and other required documents. Application is made to the program in which a graduate degree is desired or, if no degree is desired, to the Graduate Division in which special interest is held. A baccalaureate degree from a regionally accredited college or university is required.

It is sometimes possible to gain limited admission through a simplified procedure whereby students fill out an application form and present evidence of holding the baccalaureate. Students so admitted are placed in a special, nondegree category. If the student decides to work toward a graduate degree, only a limited number of hours taken in this category may be approved to apply toward the KU degree.

If admission to the Graduate School was not gained at the time of first enrollment, the student may be permitted to enroll in a special undergraduate category. However, the graduate admission process should be started immediately since, if the student is not officially admitted by the deadline of the individual Graduate Divisions (or if no deadline is set, before the end of the course), credit is recorded as undergraduate. Graduate status may not be awarded retroactively for course work after a semester has ended or after completion of a distance-learning course. For courses of short duration (less than one semester), early admission is particularly urgent. Being permitted to enroll in a graduate-level course without first being admitted as a graduate student does not guarantee admission to graduate status.

Criteria for admission and categories of admission are described under Admission in this chapter.

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 special, 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 course 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 residency requirement. For maximum combined dis-
tance-learning courses and transferred credits, see Credit by Transfer in this chapter of the catalog.

**Extramural Independent Study/ Distance Learning (Correspondence)**

No graduate credit is given for correspondence 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 the Graduate School.

**General Regulations**

**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 or the Graduate School and is taught by a person holding a current appointment to the Graduate Faculty.

**Credit by Examination**

The Graduate School does not accept credit by examination.

**Credit by Transfer**

Six hours of graduate credit (but not distance-learning courses) 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 transfer has 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. Transferred credit and graduate continuing education credit including distance-learning courses (limited to KU courses) together may not exceed 6 hours—or 8 hours if the condition just indicated is met—and they must not be the last hours required for the degree. Only work graded B (3.0 on a 4.0 scale) or higher may be transferred. KU does not accept transfer credit from other institutions for graduate-level courses completed in institutes and workshops or given for life/work experience.

No courses taken for undergraduate or post-baccalaureate (nongraduate) credit either at KU or elsewhere may be transferred to KU to count toward an advanced degree.

Courses that were counted toward meeting the requirements of a graduate degree, completed either at KU or at another institution, may not be used toward meeting the requirements for an additional advanced degree at KU.

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

**Enrollment**

The normal full-time enrollment for a graduate student is 9 credit hours per semester or 6 hours per summer session. Students are not normally permitted to enroll for more than 16 hours a semester or more than 8 hours in summer session. If a student is on the staff, the hours of enrollment should be limited accordingly—usually to no more than 10 hours for a half-time or 6 hours for a full-time staff member. The enrollment of those with foreign student (F-1) visas must conform to the minimum established by the regulations of the Immigration and Naturalization Service. International students must conform to the residence requirements of the Graduate School, even if the minimal enrollments of the INS are lower.

**Online Enrollment**

The Office of the University Registrar offers enrollment online. For information and procedures, see [www.registrar.ku.edu/timetable](http://www.registrar.ku.edu/timetable).

**Full-time Student Classification and Residence Requirement**

The following student loads for course work and/or appointments at KU for teaching or research represent full-time graduate student status for degree-seeking students for purposes of qualifying for fellowship tenure, student loan deferment, and similar certification, and for meeting residence requirements for doctoral degrees. (These are minimum Graduate School residence requirements. Please check with the Graduate Division of your school or college for additional requirements.) Those on foreign student (F-1) visas holding assistantships must meet INS requirements. See Enrollment, above.

- 9 credit hours
- 6 credit hours and half-time teaching or research at KU

These figures are the minimum number of credit hours a student may carry and still be certified full time. A student may enroll for more hours with the approval of the department or program adviser, within general guidelines. Degree-seeking graduate students who are employed more than half time must be enrolled for at least 6 hours per semester to be certified as full-time students. For a student who is a full-time employee at KU to fulfill the residence requirement, the KU employment must contribute substantially to the student’s graduate program. For additional information on residence requirements for doctoral degrees, see the requirements for those degrees.

**Grading**

The basic system in the Graduate School 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 a degree.

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 se-
mester, 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. The grade of I for graduate courses remains unchanged on the student’s record except that, should the student subsequently complete the course work, the instructor would then change the I to a letter grade: A, B, C, D, or F.

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 authority 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 and Graduate School, 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 the Graduate School.

In the Graduate School 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.

Probation. Upon falling below a cumulative graduate grade-point average of B, computed with the inclusion of 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 the Graduate School. The grades of P, S, U, and I, for which no numerical equivalents are defined, are excluded from the computation. If the student’s overall graduate average has been raised to B by the end of the next semester of enrollment after being placed on probation, the student may be returned to regular status. If not, the student will not be permitted to re-enroll in the Graduate School unless the Graduate Division or the Graduate School acts favorably on a departmental recommendation for the student to continue study.

If admitted on probation, a student must earn an overall graduate average of at least B during the first semester of enrollment (in which case the student is considered to have achieved regular status) to be permitted to re-enroll. A student admitted on probation who fails to earn a B average in the first semester is not permitted to re-enroll. When the particular circumstances are deemed to justify continuation, and upon the recommendation of the department or program, such a student may be continued on probation by the Graduate Division or the Graduate School for one additional semester equivalent of full-time graduate study.

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 admission to the Graduate School.
2. The course must have been approved by the Graduate School for the award of graduate credit.
3. The instructor must have gained appointment to the Graduate Faculty.

Courses on permanent records that are assigned the 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 heard at one of these levels is made to the Judicial Board. The Graduate School has established a set of guidelines for graduate student petitions in certain categories that may not be under the jurisdiction of other hearing bodies. The Executive Committee of the Graduate Council has identified two categories as the purview of the Graduate School:
1. Cases involving the Graduate Divisions of two or more schools or colleges.
2. Cases involving the interpretation of Graduate School 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 these guidelines, contact the Graduate School, (785) 864-6161.

**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 the work 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.ku.edu/~provost.

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

See Doctoral Degree Programs.

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

The Graduate School has no 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 (Doctoral Students)**

A doctoral student may petition his or her Graduate Division or the Graduate School 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 may also 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, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate Division.

**School, Division, and Level Codes for Graduate Students**

All graduate students (except seniors co-enrolled with the Graduate School) are assigned school, division, and level codes from this list:

- Graduate School code: G
- School/College codes:
  - Liberal Arts & Sciences: A
  - Business: B
  - Education: D
  - Engineering: E
  - Fine Arts: F
  - Allied Health: H
  - Journalism and Mass Communications: J
  - Medicine: M
  - Nursing: N
  - Pharmacy: P
  - Architecture and Urban Design: R
  - Social Welfare (Ph.D. students only): S
  - Continuing Education (nondegree only): Z

**Level codes:**

- Degree-seeking students admitted to regular, probationary, and provisional status: 0
- Lower-level students, those who have completed fewer than 30 hours of graduate credit: 0
- Upper-level students, those who have completed 30 or more hours of graduate credit: 6
- Nondegree students, those who have been admitted to nondegree A or C categories or Continuing Education: 9

**Seniors and Graduate Study (Coenrollment)**

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

If admission is approved, the student enrolls with undergraduate school and level codes. The Graduate Division is responsible for sending written notification to the University Registrar’s office, designating which courses will earn graduate credit and which will earn undergraduate credit. The student’s graduate permanent record begins with the first term of graduate enrollment following the awarding of the baccalaureate degree, although the coenrolled graduate credit applies to the graduate degree.

To meet the criteria of co-enrollment, the student must earn undergraduate credit for at least one class during the co-enrollment semester. Continuing Education courses cannot meet this requirement, because they have a nine-month completion time period.

Graduate courses completed beyond the initial semester of co-enrollment revert to undergraduate status if co-enrolled students fail to complete their undergraduate degrees in the specified semester.

**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. The student’s responsibilities for such activities are described below:

1. **Human Subjects Committee, Lawrence.** KU requires prior review by the Advisory Committee on Human Experimentation 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 KU guidelines for research involving human subjects, to submit an application, and to observe the conditions of the committee-approved application. Normally these guidelines first are discussed with the student’s adviser, but students are encouraged to contact the HSCL Coordinator, David Hann, (785) 864-7429, dhann@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 David Hann 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
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 121, Lawrence, KS 66045-7535, (785) 864-4422, www.registrar.ku.edu/fees or www.ku.edu/tuition.

The KUMC Office of the Registrar is in 3001 Student Center, Mail Stop 4029, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7055, www2.kumc.edu/studserv/ro.htm.

General Regulations; Tuition & Fees

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 the Environment, Health, and Safety department.) 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 EHS department, the Laboratory Safety–Biohazard Sub-committee, 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 must be carried out by individuals appropriately trained as specified in federal regulations and approved by the Institutional Animal Care and Use Committee (IACUC). The staff of the Animal Care Unit (ACU) conducts orientation and training sessions at the beginning of each semester. 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 the ACU at (785) 864-5587, Lawrence, or (913) 588-7015, KU Medical Center, for information.

Student Responsibilities

All graduate students are responsible for informing themselves of requirements of the Graduate School as stated in the most recent issue of the Graduate School Catalog. 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 and Graduate School office are ready to answer questions and offer counsel.

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 or Graduate School. The student must bring a course selection form, a letter of explanation and recommendation from the adviser, and current academic record to the Graduate Division or Graduate School for approval. If approved, the Graduate Division or Graduate School prepares and signs a Special Permission/Approval form, which the student must present to the staff in Enrollment Services in order 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 in the Graduate School. Because of the variety of appointments covered by such terms as Lecturer, Associate, or the like, every such case must be considered individually, with the student’s department making a recommendation to the Graduate School before the student begins the graduate degree or certificate program, or 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 in the Graduate School, the responsibility for initiating a request for waiver of the rule lies with the student. The Graduate School may make waivers in rare cases where the student and his or her 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/timetable. Select “Add/Drop/Change of Section” to find current procedures. The Office of the University Registrar, Enrollment Services, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7535, (785) 864-5462, enrollment@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/timetable. Select “Withdrawal” to find withdrawal procedures. The Office of the University Registrar, Enrollment Services, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7535, (785) 864-5462, enrollment@ku.edu, also can provide current information.

Tuition and Fees

At the time of this printing, tuition and fee rates for academic year 2003-04 had not been established. Tuition and fees are assessed by the Office of the University Registrar on the Lawrence campus and the Office of the Registrar at the Medical Center in Kansas City. Rates vary for students at the Medical Center according to the programs in which they are enrolled. A full description of tuition and fees is available each semester at www.registrar.ku.edu/timetable.

Tuition and fees are set by the Kansas Board of Regents and are subject to change at any time. Current information is available from the Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 121, Lawrence, KS 66045-7535, (785) 864-4422, or online at www.registrar.ku.edu/fees or www.ku.edu/tuition.

Graduate students who enroll in undergraduate-level courses (numbered 100 through 499) pay tuition at the undergraduate rate.

Late Enrollment Fee

A charge of $75 (which increases to $150 after the fifth day of classes) is collected from students who enroll after the scheduled enrollment period ends. See www.registrar.ku.edu/timetable for applicable dates.

Engineering Fee

A fee of $15 per credit hour is charged for enrollment in all courses in the School of Engineering.

Master’s-level Business Fee

A fee of $57.20 per credit hour is charged for enrollment in all master’s-level business courses.

Mediated Course Fee

Online courses are subject to a mediated course fee of $30 per credit hour. Additional premium fees may be assessed for online courses with higher development and maintenance costs or greater market value.
Asian languages and cultures, B.A., M.A., and Ph.D. in
enrolling in required courses unique to the major.

Requirements include actively pursuing the degree and
Kansas at the rates paid by Kansas residents. Eligibility
roll in certain educational programs at the University of
Missouri, qualified students who would be eligible to pay
By joint agreement of the Board of Regents of the state
about $500 a year for most students.

The cost of new textbooks and supplies varies, but is
Books and Supplies

for educational purposes other
than just educational. You must meet these criteria for
make Kansas your permanent home indefinitely and
meet living expenses, and (3) demonstrated intent to
in Kansas, (2) reliance on Kansas sources of support to
meet criteria: (1) continuous physical residence in
Kansans 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, Law-
rence, KS 66045-7535.

In general, you qualify for resident rates if you meet
three basic criteria: (1) continuous physical residence in
Kansans, (2) reliance on Kansas sources of support to
meet living expenses, and (3) demonstrated intent to
make Kansas your permanent home indefinitely and
that you are residing in the state for purposes other
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 fol-
lowing 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 in-
sitution within six months of high school graduation, who were resi-
dents for tuition and fee purposes at some point in the 12 months be-
fore graduation, and who remain continuously enrolled at a Board of
Regents institution.
• Employees of Kansas Board of Regents institutions who are em-
ployed at least 40-percent time and are not seasonal, hourly, or tempo-
rary. Their dependents are also eligible.
• Employees who are transferred or recruited to Kansas and their de-
pendents. 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.

Residency Requirements

For information about fellowships and scholarships,
see The Graduate School and International Programs
chapter of this catalog.

Financial Aid

Persons over the age of 60 may audit courses with-
out paying tuition or the required campus fee at this
and other Regents institutions in Kansas on a space-
available basis and with consent of the instructor.

General Information

Tuition & Fees; Financial Aid

Pharmacy Fee
A fee of $91.76 per credit hour is charged for enrol-
ment in all courses in the School of Pharmacy.

Payment of Tuition and Fees
Students must pay tuition and fees in full by the desig-
nated date each term in order to maintain their enroll-
ments. Tuition and fees are assessed by the Office of
the University Registrar for the Lawrence and Edwards
Campuses and by the Office of the Registrar at the
Medical Center in Kansas City. Tuition and fee rates
vary for students according to the program in which
the student is enrolled. A full description of applicable
tuition, fees, and payment deadlines is available at
www.registrar.ku.edu/fees.

Persons over the age of 60 may audit courses with-
out paying tuition or the required campus fee at this
and other Regents institutions in Kansas on a space-
available basis and with consent of the instructor.

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 en-
roll 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.A. and M.A. in East
Asian languages and cultures, B.A., M.A., and Ph.D. in
Slavic languages and literatures (not Russian), M.M.E.
in music therapy, B.Arch., B.S. in architectural engi-
neering, professional M.Arch., and Ph.D. in linguistics.

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.

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 between
KU, the Kansas Board of Regents, and the Kansas As-
sociation of Public Employees, which represents KU
GTAs in Lawrence. Persons holding GTA appoint-
ments 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 per semester. GTAs who are unable to enroll
in 6 hours for medical reasons or other hardships may petition the Of-
ce of the Provost to waive this requirement. They must present sup-
porting documentation and have the approval of the employing depart-
ment (and the department of study if the two are different). Upon suc-
cessful completion of the doctoral comprehensive examination and all
other Graduate School and departmental requirements 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 equiva-
 lent work approved by the Office of the Provost.
3. During the term of appointment, the GTA must be in good aca-
demic standing and make satisfactory progress toward a graduate de-
gee, as determined by the Graduate School and the department in which
the student is enrolled. Students admitted to a degree program on proba-
tionary or provisional status are not in good standing for the purpose of
GTA appointments. A graduate student must maintain a cumulative

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
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 coursework 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 Graduate School and departmental 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 the Provost.
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 or in the student’s major department.
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 the Graduate School and the department in which the student is enrolled. Students admitted to a doctoral program on probationary or 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 Provost that the student be allowed to keep the GRA position for one additional semester.
6. The GRA positions are approved by the Office of the Provost for Research, 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 rates for tuition only. Required campus fees, Edwards Campus construction and other special fees, off-campus fees, mediated fees, and additional professional school fees in Business, Engineering, Law, and Pharmacy 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.

GTA Tuition Assistance. In certain instances, tuition assistance may be available for GRAs, either through the grant source or through the tuition assistance program for doctoral graduate research assistants managed by the Office of the Provost. Information is available in the GTA/GRA Information/Documents section of the Provost’s office Web site, www.ku.edu/~provost. 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 or 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 program, for which KU provides a contribution. Other student health insurance plans are available to all students, regardless of employment status. Information about GTA/GRA health care benefits plans, costs, and KU contributions is available from the Office of Staff Benefits, Department of Human Resources, (785) 864-4946, or on the Human Resources Web site, www.ku.edu/~hr/hr benefits/healthcare.html. Information about other student health plans 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 or a score on the SPEAK administered by the Applied English Center at KU. The minimum TSE score necessary for an offer of an assistantship is 50 points. The minimum SPEAK score necessary is 240 points. Applicants who do not attain that score are not eligible for...
GTA positions but may enroll in an English course offered by the Applied English Center for international graduate teaching assistants. Upon attainment of a minimum score of 240 on the SPEAK or a minimum score of 50 on the TSE, a student may reapply for an assistantship. This regulation applies to all students who are not native speakers of 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 University Career and Employment Services, (785) 864-3624, www.ku.edu/~uces. A listing of current jobs is available at www.ku.edu/~uces/student_jobs.shtml.

Student Services

Graduate Student Associations

Lawrence. All KU graduate students on the Lawrence campus are members of the Graduate and Professional Association. The GPA is governed by a seven-member elected Executive Committee (GradEx). The 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. The GPA publishes the Graduate NewsPaper (GNP) and other publications several times each year, conducts surveys on matters of graduate student concern, and co-sponsors campuswide events for graduate students. The GPA office is in 426 Kansas Union, (785) 864-4914, www.ku.edu/~gpa.

KU Medical Center. The Graduate Student Council is composed of representatives from all graduate departments on the Kansas City campus. The GSC sponsors and organizes the annual Student Research Forum. In the 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 interdisciplinary interactions at the research level. The GSC also sponsors social events and participates in philanthropic events. It provides orientation information for incoming graduate students at registration. The GSC lobbies for student interests on the Kansas City campus and provides student representation on numerous faculty committees at the medical center.

Health Services

Lawrence. Student Health Services, in Watkins Memorial Health Center, www.ku.edu/~shs, has a staff of full-time physicians and support personnel. Regular hours are 8 a.m. to 8 p.m. Monday–Friday; 8 a.m. to 4:30 p.m. Saturday, and 12:30 to 4:30 p.m. Sunday. Hours vary when school is not in session.

KU Medical Center. Student Health Services is available to students who pay the student health fee to the KU Medical Center campus. Student Health Services is on the first floor of the Student Center Building and is open from 8 am until 4:30 pm Monday through Friday. The office is closed on all state holidays.

Medical Center Health Insurance. All full- and part-time students at KU Medical Center must have proof of health insurance coverage at all times. Upon enrollment, each student must complete a health insurance affidavit form and supply a copy of the front and back of the current insurance card to Student Health Services. Students who do not have proof of health insurance may purchase the university student health insurance plan provided by the state.

Medical Center Immunization Policy. All KUMC students must have complete immunization records on file in Student Health Services upon arrival on campus. Complete immunization requirements can be obtained from Student Health Services (913) 588-1941, www.kumc.edu/studentcenter/health.

Housing

Lawrence. KU has seven residence halls. Stouffer Place has apartment units for married students and single parents. Jayhawker Towers Apartments is an apartment complex for unmarried students. Off-campus housing is available.

KU Medical Center. Apartment complexes, private apartments, and houses are available within walking distance of the Medical Center.

Lawrence Services

Academic Offices. The Graduate School and dean’s offices provide academic information and support.

The University of Kansas School/Department of _____* Lawrence, KS 66045

*Indicate the school or department that offers a program in your field of interest.

or

The University of Kansas Graduate School, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535,

(785) 864-6161, fax: (785) 864-4555,

e-mail: graduate@ku.edu, URL: www.gradient.ku.edu

Applications. Submit your application to the Graduate School online at wwwgraduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School, Graduate Applications, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535

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

Bookstores

KU Bookstores, Burge Union, Level 2, 1601 Irving Hill Rd., Lawrence, KS 66045-7557,

(785) 864-5697, www.jayhawks.com

KU Bookstores, Kansas Union, Level 2, 1301 Jayhawk Blvd., Lawrence, KS 66045-7548,

(785) 864-4640, www.jayhawks.com

Career Planning and Placement

Career Counseling and Planning Service, Watkins Memorial Health Center, 1200 Schweger Dr., Room 2124, Lawrence, KS 66045-7559,

(785) 864-2767, www.ku.edu/~caps/career

www.kumc.edu/studentcenter/health.
Student Services

School of Business Career Services, Summerfield Hall, 1300 Sunny Side Ave., Room 125, Lawrence, KS 66045-7585, (785) 864-5591, www.business.ku.edu
School of Engineering Career Services Center, Learned Hall, 1530 West 15th St., Room 4010, Lawrence, KS 66045-7609, (785) 864-3891, www. engr.ku.edu/engr-car
School of Journalism and Mass Communications, Career Center, Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 210, Lawrence, KS 66045-7575, (785) 864-7648, www.ku.edu/~j-school
University Career and Employment Services, Burge Union, 1601 Irving Hill Rd., Room 110, Lawrence, KS 66045-7557, (785) 864-3624, www.ku.edu/~uces
Catalogs
Request catalogs, 24 hours a day, seven days a week: (785) 864-9036, graduate@ku.edu

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

Concerts and Recitals
Department of Music and Dance, (785) 864-3436, www.ku.edu/~sfa/mad
Lied Center Box Office, (785) 864-ARTS (2787), www.ku.edu/~lied
Murphy Hall Box Office, (785) 864-3982, www.kutheatre.com
Student Union Activities, (785) 864-3477, www.suaevents.com

Continuing Education
Continuing Education, 1515 St. Andrews Dr., Lawrence, KS 66045-1625, (785) 864-4790, www.kuce.org
Counseling
Counseling and Psychological Services, Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150, Lawrence, KS 66045-7559, (785) 864-2708, www.ku.edu/~caps/testing

Graduate Admission Tests
For information about the
• Graduate Management Admission Test (GMAT)
• Graduate Record Examination (GRE)
• Medical College Admission Test (MCAT)
• Miller Analogies Test (MAT):

Graduate School Career Services Center, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535, (785) 864-6161, fax: (785) 864-4555, e-mail: jangusto@ku.edu, URL: www.graduate.ku.edu

Health Service
Student Health Services, Watkins Memorial Health Center, 1200 Schwegler Dr., Room 2150, Lawrence, KS 66045-7535, (785) 864-9500, www.ku.edu/~shs

Housing
Jayhawker Towers Apartments, 1603 West 15th St., Lawrence, KS 66044, (785) 864-8305 or (785) 864-4560
Stouffer Place, (785) 864-8305 or (785) 864-4560

Information and Referrals
Student Development Center, Strong Hall, 1450 Jayhawk Blvd., Room 301, Lawrence, KS 66045-7535, (785) 864-4064, www.ku.edu/~develop
University Information Center, Anschutz Library, walk-in and phone, (913) 864-3506, www.ku.edu/~kuinfo

International Students
Applied English Center, Lippincott Hall, 1410 Jayhawk Blvd., Room 204, Lawrence, KS 66045-7535, (785) 864-4606, www.aec.ku.edu

International Undergraduate Admissions, Strong Hall, 1450 Jayhawk Blvd., Room 17, Lawrence, KS 66045-7535, (785) 864-2616, issapps@ku.edu
Office of International Student and Scholar Services, Strong Hall, 1450 Jayhawk Blvd., Room 2, Lawrence, KS 66045-7535, (785) 864-3617, www.ku.edu/~issfacts

Language Laboratory
Ermal Garinger Academic Resource Center, Wescoe Hall, 1445 Jayhawk Blvd., Room 4069, Lawrence, KS 66045-7590, (785) 864-4759, EGARC@ku.edu

Legal Services
Legal Services for Students, Burge Union, 1601 Irving Hill Rd., Room 148, Lawrence, KS 66045-7557, (785) 864-5665, legals@ku.edu

Libraries
Watson Library, 1425 Jayhawk Blvd., Lawrence, KS 66045-7544, (785) 864-3956, www.lib.ku.edu (See also Research and Academic Support.)

Loans
Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7535, (785) 864-4700, osfa@ku.edu

Multicultural Students
Office of Multicultural Affairs, Strong Hall, 1450 Jayhawk Blvd., Room 145, Lawrence, KS 66045-7535, (785) 864-4351, www.ku.edu/~oma

Multicultural Resource Center, 1530 Summerfield Hall Dr., Lawrence, KS 66045-7607, (785) 864-4350, www.ku.edu/~oma/mrc

Nontraditional Students
Student Development Center, Strong Hall, 1450 Jayhawk Blvd., Room 22, Lawrence, KS 66045-7535, (785) 864-4064, www.ku.edu/~develop

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

Safety and Crime on Campus
The annual security report about KU safety policies, crime statistics, and campus resources is available online at www.ku.edu/safety or on paper by contacting the Dean of Students, Strong Hall, 1450 Jayhawk Blvd., Room 133, Lawrence, KS 66045-7535, (785) 864-4060.

Sexual Assault Prevention
Sexual Assault Prevention and Education Program, Emily Taylor Women’s Resource Center, Strong Hall, 1450 Jayhawk Blvd., Room 22, Lawrence, KS 66045-7535, (785) 864-3552, www.ku.edu/~etwrc

Speech-Language-Hearing Clinic
Schiefelbusch Speech-Language-Hearing Clinic, Haworth Hall, 1200 Sunnyside Ave., Room 2101, Lawrence, KS 66045-7534, (785) 864-4690, wwwlsi.ku.edu/splh/clinic.htm

Student Academic Records
Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 121, Lawrence, KS 66045-7535:
- Enrollment, Transcripts, Tuition and Fee Payment, (785) 864-4422
- Residency, (785) 864-4472
- Veterans’ Services, (785) 864-5426 www.registrar.ku.edu

Student Activities, Organizations, Recreation Center for Campus Life, Kansas Union, 1301 Jayhawk Blvd., Room 400, Lawrence, KS 66045-7548, (785) 864-4861, www.ku.edu/~olctr

Dean of Students, Strong Hall, 1450 Jayhawk Blvd., Room 133, Lawrence, KS 66045-7535, (785) 864-4060, www.ku.edu/~stlife

Jaybowl, Recreation Center, Kansas Union, 1301 Jayhawk Blvd., Lawrence, KS 66045-7548, (785) 864-3545, www.jayhawks.com/union

Kansas and Burge Unions, (785) 864-4651, www.jayhawks.com

Recreation Services, Robinson Center, 1301 Sunnyside Ave., Room 208, Lawrence, KS 66045-7567, (785) 864-3546, www.ku.edu/~recserv

Student Union Activities, Kansas Union, 1301 Jayhawk Blvd., Lawrence, KS 66045-7548, (785) 864-3477, www.suaevents.com

Student Employment
University Career and Employment Services, Burge Union, 1601 Irving Hill Rd., Room 110, Lawrence, KS 66045-7557, (785) 864-3624, www.ku.edu/~uces

Students with Disabilities
Services for Students with Disabilities, Strong Hall, 1450 Jayhawk Blvd., Room 135, Lawrence, KS 66045-7535, (785) 864-2620 (Voice/TTD), www.ku.edu/~ssdis

Study Abroad

Women’s Resources
Emily Taylor Women’s Resource Center, Strong Hall, 1450 Jayhawk Blvd., Room 22, Lawrence, KS 66045-7535, (785) 864-3552, www.ku.edu/~etwrc

Writing Center
KU Writing Center, Wescoe Hall, 1445 Jayhawk Blvd., Room 4005, Lawrence, KS 66045-7590, (785) 864-2399, www.ku.edu/~writing
Student Services

KU Medical Center Services
Academic Offices. Graduate Studies and the dean's offices of the schools provide academic information and support to students.

School/Department of ____
The University of Kansas Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160
*Indicate the school or department that offers a program in your field of interest.

On the Medical Center campus,
Kirmayer Fitness
Center's regular hours are Monday to Thursday—5:30 a.m. to 10 p.m.
Friday—5:30 a.m. to 8 p.m.
Saturday—9 a.m. to 6 p.m.
Sunday—noon to 10 p.m.

The Office of the Vice Chancellor for Academic Affairs and Dean of Graduate Studies at KUMC is in 5015 Wescoe Pavilion, Mail Stop 1040, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1258.

Applications and Assistantships
Contact the school or department that offers a program in your field of interest.

Bookstore
KU Med Books, G014 Orr-Major Bldg., Mail Stop 4036, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-2537 or (800) 262-7509, e-mail: bookstor@kumc.edu, URL: www.kumedbooks.com

Computer Resources
Archie R. Dykes Library for Health Sciences, Mail Stop 1050, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-5070, http://library.kumc.edu

Educational Resource Center, G004 Orr-Major Bldg., Mail Stop 3035, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7343, www2.kumc.edu/ite

Instructional Technology Center, G010 Wahl Hall West, Mail Stop 3035, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7155, www2.kumc.edu/ite

Student Union Corporation, G014 Orr-Major Bldg., Mail Stop 4036, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-2537 or (800) 262-7509, www.kumedbooks.com

Education Services
Tuition and Fee Payment, Veterans’ Benefits
Student Records: Loan Deferments, Registration, Counseling
Learning Specialist, G116 Student Center, Mail Stop 4006, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-4695, fax: (913) 588-6597, e-mail: shinsurance@kumc.edu, URL: www.kumc.edu/studentcenter/healthinsure

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

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

Student Records: Loan Deferments, Registration, Tuition and Fee Payment, Veterans' Benefits
Office of the Registrar, 3001 Student Center, Mail Stop 4029, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-4695, fax: (913) 588-6597, e-mail: financialaid@kumc.edu, URL: www.kumc.edu/studentcenter/financialaid

Libraries
Archie R. Dykes Library for Health Sciences, Mail Stop 1050, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-5070, http://library.kumc.edu

Clendening History of Medicine Library, 1020 Robinson, Mail Stop 1024, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7244, http://clendening.kumc.edu

Pulse, is the KU Medical Center's computer information system.

The University of Kansas Edwards Campus
12600 Quivira Road, Overland Park, KS 66213-2402 Phone: 864-8400 (from Lawrence) or (913) 897-8400, e-mail: angiej@ku.edu URL: http://edwardscampus.ku.edu
The Graduate School
and International Programs

Diana B. Carlin, Dean
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535, (785) 864-6161

Goals of Graduate Study ............................ 37
The Graduate Faculty ................................. 37
  Regular Graduate Faculty Membership .......... 37
  Chair of Doctoral Dissertation Committees
    (Dissertation Status) .................................. 38
  Ad Hoc & Special Graduate Faculty Appointments 38
  Ad Hoc Appointments .................................. 38
  Special Appointments ................................. 38
  Graduate Education Privileges (chart) ............ 38
The Graduate School ................................. 39
International Programs ............................. 39
  International Student Policy ......................... 39
  Office of International Programs ..................... 39
  KU Medical Center International Programs ........ 40
Interinstitutional Programs & Studies ........... 40
Fellowships & Scholarships .......................... 40
  Chancellor’s Fellowships ............................ 40
  Honors Fellowships ..................................... 40
  First-year Graduate Fellowships ..................... 40
  Madison & Lila Self Graduate Fellowships ........... 41
  Dissertation Fellowships .............................. 41
  Melik Graduate Fellowships/Scholarships .............. 41
  Minority Teaching Assistantships .................... 41
  Dwight Eisenhower/Clifford Roberts Fellowships ..... 41
  Harry S Truman Good Neighbor Awards ............... 41
  Direct Exchange Scholarship Program .............. 41
  Departmental Fellowships & Traineeships ........... 42
  Graduate Student Travel Funds ...................... 42
Preparing Future Faculty ........................... 42
  Graduate Studies Course ............................. 42
Preparing Future Professionals ..................... 42
The Graduate School and International Programs

Diana B. Carlin, Dean
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535
Phone: (785) 864-6161, Fax: (785) 864-4555
graduate@ku.edu or www.graduate.ku.edu

The Graduate School of the University of Kansas is responsible for graduate education at campuses in Lawrence, Kansas City, and Wichita and at educational and research facilities throughout the state. The Graduate School consists of the Graduate Faculty, the graduate student body, and the Graduate School administrative organization, composed of the Office of the Graduate School and the Graduate Divisions of the schools responsible for programs leading to degrees awarded by the Graduate School.

The Graduate School offers the Master of Arts degree in 48 fields, the Master of Science in 33, and specific professional master's degrees in 16 programs; the professional degree of Specialist in Education; and the Doctor of Philosophy degree in 63 fields, as well as professional doctorates of Education, Engineering, and Musical Arts. In these degree programs and, in increasing numbers in nondegree-oriented enrollments, on the Lawrence and Kansas City campuses and off campus, the Graduate School currently enrolls about 6,000 graduate students.

Goals of Graduate Study

Independent scholarship, competence in research or other creative work, and the nurture 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 remain significant 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 the 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.

Membership criteria for Graduate Faculty status may be found online at www.graduate.ku.edu.

Criteria for membership in the Graduate Faculty, approved by the Graduate Council, April 26, 2001:

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 Graduate School 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 the requirements of the department and the Graduate School 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 of 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. 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). To qualify for the privilege of chairing doctoral dissertation committees, a regular member of the Graduate Faculty must demonstrate (1) the maintenance of a continuous program of scholarly activity including a record of current scholarship, publication, and other contributions to the field; (2) a record of teaching graduate courses; and (3) continuous advising and mentoring graduate students and serving on thesis and dissertation committees. It is the graduate program’s responsibility to nominate members of the Graduate Faculty for authorization to chair doctoral committees and to provide evidence of scholarship and involvement in the graduate education program. Authorization for continuation of the privilege of chairing dissertation committees is reviewed as part of each periodic graduate program review and may also be reviewed in the context of other external or internal program reviews.

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 Standing Committee on Graduate Faculty Appointments and Authorizations for consideration.

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 the appointee’s home institution as KU courses; (3) serving on the thesis, dissertation, or examination committee of a particular student or students; 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. KU graduate students are not granted Ad hoc membership. 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 the requirements of the department and the Graduate School 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. KU graduate students are not granted Special membership. All nominations for Special appointments must

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

<table>
<thead>
<tr>
<th>Type of Graduate Faculty-appointed</th>
<th>Employed by</th>
<th>Type of faculty appointment</th>
<th>Teach graduate courses</th>
<th>Serve on master’s &amp; doctoral committee</th>
<th>Chair’s master’s committee</th>
<th>Serve as outside member on doctoral committee</th>
<th>Chair’s doctoral committee</th>
<th>Co-chair’s doctoral committee</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>No</td>
<td>Yes</td>
<td>No</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 if a Graduate Faculty member with dissertation status serves as co-chair</td>
</tr>
<tr>
<td>Ad Hoc Graduate Faculty</td>
<td>Not by KU or any of its affiliates</td>
<td>Non-tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Special Graduate Faculty</td>
<td>KU or its affiliates</td>
<td>Non-tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

1. The term “doctoral committee” refers to both oral comprehensive and dissertation defense committees.
2. A faculty member with the appropriate status may 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.
The Graduate School

The graduate student body is composed of those persons admitted to graduate study in the Graduate School by the Graduate Divisions of the college and schools and currently enrolled in graduate programs.

The Office of the Graduate School comprises the Dean of the Graduate School and any Associate or Assistant Deans of the Graduate School.

Along with its traditional undergraduate administrative structure, each school (Architecture and Urban Design, Business, Education, Engineering, Fine Arts, Journalism and Mass Communications, Pharmacy, and, for the doctoral degree, Social Welfare) maintains a Graduate Division*, headed by a Dean or Director of Graduate Studies. Graduate Studies on the KU Medical Center campus maintains the Graduate Division* for the Schools of Allied Health, Medicine, and Nursing. Graduate Divisions are responsible for the day-to-day administration of graduate programs under guidelines laid down by Graduate School governance. Such responsibilities include admission and retention of graduate students, maintenance of student files, conduct of degree examinations, approval of course and curricular changes, and granting of exceptions to Graduate School regulations. For graduate students in the College of Liberal Arts and Sciences, these functions are shared between the Graduate School and the dean’s office of the College of Liberal Arts and Sciences. Graduate Divisions report to the Graduate School dean on matters within the dean’s purview and refer other matters directly or through appropriate committees for action.

In 1997, the Graduate School adopted a new Constitution and Bylaws. The governance bodies of the Graduate School are the Graduate Council and five standing committees. The Graduate Council is made up of representatives from each graduate degree-granting department or program of the Graduate School. The Graduate Council is responsible for setting and maintaining major policies having to do with graduate education brought to it by the Dean of the Graduate School or the standing committees. Its actions are final unless the council chooses by a two-thirds vote to place a motion for voting by mail ballot before the Graduate Faculty, the Graduate Executive Committee, and the representatives of all Graduate Student Organizations. In such a case, a majority of those voting by mail determine the issue.

Each standing committee is made up of members of the Graduate Council and has specifically assigned responsibilities. The standing committees are New Degrees and Degree Program Changes; Program Review; Graduate School Fellowships, Scholarships, and Student Affairs; Graduate Faculty Appointments and Authorizations; and the Executive Committee. The Executive Committee receives reports and recommendations of the other standing committees; determines whether new matters should go to one of the standing committees, to an ad hoc committee, or to the entire Graduate Council; sets the agenda for Graduate Council meetings; and refers committee recommendations and reports to the Graduate Council.

*The term “Graduate Division” without further qualification indicates the administrative office of each school responsible for graduate programs.

International Programs

International Student Policy
The University of Kansas believes that the increasing interdependence of the nations of the world makes any kind of isolationism undesirable. Personal interactions among qualified foreign students and U.S. students and faculty can help all those involved to eliminate prejudices and cross-cultural misunderstandings. The experience should create a healthy appreciation of the world’s cultures, ideas, and nationalities.

Office of International Programs
Dean: Diana B. Carlin
Strong Hall, 1450 Jayhawk Blvd., Room 300,
Lawrence, KS 66045-7535
(785) 864-6161, www.ku.edu/~oip

The office 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 this 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.

Besides Direct Exchange Scholarship programs, KU offers 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 France-Comté, Besançon (France)
- Gornyi Institute, St. Petersburg University (Russia)
- University of Santiago de Compostela (Spain)
- Ivan Franko University, Lviv (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 Office of Study Abroad, Lippincott Hall, 1410 Jayhawk Blvd., Room 108, Lawrence, KS 66045-7515, (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, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535, (785) 864-6161.

Information about business studies in Asolo, Italy, through the Consortium of Universities for International Business Studies in Italy is available from the School of Business, 1300 Sunnyside Ave., Lawrence, KS 66045-7585, (785) 864-7576, ItalyCIMBA@ku.edu.

The 2004 edition of U.S. News America’s Best Graduate Schools ranks 22 KU graduate programs in the top 25 among the nation’s public universities.

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. These include:
- Cooperative doctoral program in geology with Kansas State University.
- Cooperative doctoral transfer program in teaching and leadership with Emporia State University.
- Cooperative doctoral transfer program in teaching and leadership with Pittsburg State University.
- Cooperative master’s program 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.

Fellowships and Scholarships

The Graduate School has available a limited number of fellowship awards to recognize academic superiority and to assist meritorious students in the timely completion of their degree programs. Applicants for admission to the Graduate School who wish to be considered for these awards must supply the required supporting materials to the proposed major department. Graduate students interested in fellowships should consult their departmental or program advisers and request that formal nomination be made to the Graduate School. Nominations must be made on standard forms supplied by the Graduate School, accompanied by letters of recommendation, current official transcripts, and if available, additional evidence of scholastic attainment. Each nominee must prepare a statement describing academic and professional goals and the effect that an award would have in attaining these goals. It is the responsibility of the nominee and department to provide all materials required for evaluation of the nominee’s qualifications. Applications must include Graduate Record Examination aptitude test scores. In some cases, scores from other nationally administered standardized tests for graduate admission may be substituted, but only if the program requires this test for admission.

The records of award holders who have tenure remaining at the end of each enrollment period are reviewed by departmental and program advisers. A report is submitted to the Graduate School regarding academic progress, along with a recommendation for continuance or discontinuance of the award. Continuation is dependent principally on maintenance of a high level of achievement and satisfactory progress toward the degree, although all appointments are contingent on the availability of funds.

Chancellor’s Fellowships. Starting in fall 2003, the Graduate School will award two Chancellor’s Fellowships. In years one and three, the fellowships provide $21,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. The department is expected to offer a graduate teaching or research assistantship in year two, and the Graduate School provides a supplemental scholarship to raise the salary stipend to $21,000. Departments are expected to offer teaching or research assistantships for the fourth year, if needed. These fellowships recruit outstanding students for doctoral programs. Preference is given to departments not eligible for Self Graduate Fellowships. Chancellor’s Fellows must participate in either the Preparing Future Faculty or Preparing Future Professionals program.

Honors Fellowships. Honors Fellowships recruit outstanding students for graduate programs. They provide a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. Awards are made during the first and fourth or fifth year of study. For students seeking only the master’s degree, the award is made for the first year of study only. Departments are expected to offer a half-time teaching or research assistantship for the two or three intervening years for the doctoral student and for one year for the master’s student, provided the student maintains good academic standing and satisfactory employment performance.

First-year Graduate Fellowships. Students who are nominated but are not awarded Honors Fellowships are eligible for consideration for First-year Graduate Fellowships. Alternates for Honors Fellowships are also eligible. This one-year award includes a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. The nominating department must guarantee that the recipient will
Minority Graduate Teaching Assistantships. Graduate teaching assistantships are available to new U.S. ethnic minority students. The nominee must self-identify as Asian American, African American/Black, Native American, or Hispanic/Latino and must be a U.S. citizen or permanent resident. The Graduate School and the department share in funding a four-year appointment, authorized by the department. The student must maintain good academic standing and satisfactory employment performance to continue. Salaries are at the normal rate for such appointments.

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 to 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 $7,500.

Harry S Truman Good Neighbor Awards. The Harry S Truman Good Neighbor Award Foundation has invited KU to screen nominations for the Jerry Smith Scholarship for International Studies and 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. The Graduate School also maintains direct exchange scholarship programs with the University of Birmingham in England; with the Ecole Superieure de Commerce/University of Clermont-Ferrand and University of Strasbourg in France; with the Universities of Bonn, Erlangen-Nuremberg, Hamburg, Kiel, Mainz, and Stuttgart in Germany; with the Eidgenoessische 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, U.S. graduate students receive tuition and an allowance toward maintenance for an academic year of study abroad, while students from the counterpart universities in Europe and China are similarly supported at KU. U.S. students must be enrolled as graduate students or graduating seniors at KU (who must gain admission to the Graduate School 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 is normally made in the fall for awards in the following academic year, but competition opens in May. Application forms and detailed information are available at the Office of International Pro-
Preparing Future Faculty

To support the professional development of graduate students seeking academic positions, the Graduate School offers the Preparing Future Faculty program. It consists of a colloquium each semester on the academic job search process; GS 800 Preparing Future Faculty, a course overview of choosing an academic career; and a program that allows KU doctoral candidates to visit and meet faculty from area colleges and universities. This program is made possible by support from the Madison and Lila Self Graduate Fellowship program. Contact the Graduate School for information.

Graduate Studies Course

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

Preparing Future Professionals

To support the professional development of graduate students seeking professional careers outside academia, the Graduate School offers the Preparing Future Professionals program. It provides workshops each semester on seeking careers outside academia. This program is made possible by support from the Madison and Lila Self Graduate Fellowship program. Contact the Graduate School for information.

The Office of the Graduate School is in Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535.

Departmental Fellowships and Traineeships. Various graduate departments offer fellowships or traineeships, funded by external agencies.

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 if they meet the other requirements for this 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. Applications are available online at www.ku.edu/~graduate/gpp.html or at the Graduate School, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535. They should be completed and submitted at least 28 days in advance of the expected departure. A copy of the abstract of the paper must accompany the application form. The student also must show proof that the paper has been accepted for presentation, although this may be submitted later if it is not available at the time of application. Awards currently are made for travel expenses up to $400, pending availability of funds. Students must show receipts to claim the funds. Allocations are limited to one per applicant during his or her graduate studies. The Graduate Student Council contributes about three-fourths of these funds. Remaining funds come from the KU Center for Research, Inc.

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 if they meet the other requirements for this 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. Applications are available online at www.ku.edu/~graduate/gpp.html or at the Graduate School, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535. They should be completed and submitted at least 28 days in advance of the expected departure. A copy of the abstract of the paper must accompany the application form. The student also must show proof that the paper has been accepted for presentation, although this may be submitted later if it is not available at the time of application. Awards currently are made for travel expenses up to $400, pending availability of funds. Students must show receipts to claim the funds. Allocations are limited to one per applicant during his or her graduate studies. The Graduate Student Council contributes about three-fourths of these funds. Remaining funds come from the KU Center for Research, Inc.

The Office of the Vice Chancellor for Academic Affairs and Dean of Graduate Studies at KUMC is in 5015 Wescoe Pavilion, Mail Stop 1040, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1258.
Research and Academic Support

Robert E. Barnhill, Vice Provost for Research
Youngberg Hall, 2385 Irving Hill Rd.
Lawrence, KS 66045-7563, (785) 864-3441

Research Administration ............................................. 45
KU Center for Research, Inc. ........................................ 45
Research Administration ............................................... 45

Science ................................................................. 46
Center for Environmental & Occupational Health ................................................. 46
Department of Occupational Health & Environmental Medicine ........................................ 46
Center on Aging .......................................................... 46
Higuchi Biosciences Centers ........................................... 46
Center for Biomedical Research ....................................... 46
Center for BioAnalytical Research ...................................... 46
Center for Drug Delivery Research .................................. 46
Center for Neurobiology & Immunology Research ........................... 46
Institute for Child Development ....................................... 46
Developmental Disabilities Center ...................................... 46
Kansas Biological Survey ................................................ 46
Kansas Geological Survey ............................................... 47
Mental Retardation & Human Development Research Center ............................... 47
Museum of Anthropology ............................................... 47
Natural History Museum & Biodiversity Research Center ...................................... 47
Paleontological Institute .................................................. 47

Technology ............................................................. 48
Energy Research Center .................................................... 48
Information & Telecommunication Technology Center ........................................ 48
Intelligent Systems & Information Management ............................................. 48
e-Learning Design Laboratory .......................................... 48
Lightwave Communication Systems ....................................... 48
Networking & Distributed Systems ........................................... 48
Radar Systems & Remote Sensing Laboratory ........................................ 48
Wireless Communications & Digital Signal Processing ........................................... 46
Tertiary Oil Recovery Project ........................................... 48
Transportation Center ..................................................... 48

Behavioral Sciences .................................................. 48
Center for Research on Learning ........................................... 48
Institute for Effective Instruction ............................................ 48
Division of Adult Studies ...................................................... 48
Advanced Learning Technologies .......................................... 49
e-Learning Design Laboratory ........................................... 49
Schiefelbusch Institute for Life Span Studies ........................................ 49
Kansas Mental Retardation & Developmental Disabilities Research Center ........................ 49
Kansas University Center on Developmental Disabilities ........................................... 49
Juniper Gardens Children’s Project ........................................... 49
Gerontology Center ......................................................... 49
Merrill Advanced Studies Center ........................................... 49
Beach Center on Disability ............................................... 49
Research & Training Center for Independent Living ........................................... 49
Life Span Institute at Parsons ............................................. 49
Work Group on Health Promotion & Community Development .......................... 49
Center for Physical Activity & Weight Management ........................................... 49

Business & Government .................................................. 49
Center for International Business Education & Research ..................................... 49
Robert J. Dole Institute of Politics ......................................... 49
Policy Research Institute .................................................. 49
Center for Economic & Business Analysis ........................................ 49
Center for International Political Analysis ........................................... 49
Center for Metropolitan Studies ........................................... 49
Center for Environmental Policy .......................................... 50
Survey Research Center .................................................... 50

Arts ................................................................. 50
Spencer Museum of Art ..................................................... 50

Humanities ............................................................. 50
Joyce & Elizabeth Hall Center for the Humanities ........................................... 50

Research Support .......................................................... 51
Academic Computing Services ........................................... 51
Electronic Mail ............................................................. 51
KU Web Site ............................................................. 51
Shared Computing Resources ............................................. 51
Computer Labs ............................................................ 51
Computing Workshops ..................................................... 51
Computer-based Training ................................................... 51
Computing Help ............................................................ 51
Internet1 & Internet2 ....................................................... 51
Biometry & Computer Research Facilities ........................................ 51
Environment, Health, & Safety ............................................ 51
Experimental Program to Stimulate Competitive Research .................................... 51
Kansas Cancer Institute ..................................................... 52
Kansas Cancer Registry ..................................................... 52
Kansas Research & Education Network ........................................ 52
Microscopy & Electronic Imaging Laboratory ........................................ 52
Molecular Structures Group .................................................. 52
Biochemical Research Service Laboratory ........................................ 52
Mass Spectrometry Laboratory ........................................... 52
Molecular Graphics & Modeling Laboratory ........................................ 53
Nuclear Magnetic Resonance Laboratory ........................................ 53
X-ray Crystallographic Laboratory ........................................ 53
Regional Libraries & Museums ........................................ 53
Research Animal Programs ............................................... 53
University Libraries ......................................................... 54
Clendening History of Medicine Library ......................................... 54
Dykes Library for Health Sciences ....................................... 54
Law Library ............................................................. 54
University of Kansas Field Station & Ecological Reserves .................................... 54
Nelson Environmental Study Area ......................................... 54
Rockefeller Experimental Tract .......................................... 54
Hall Nature Reserve ......................................................... 54
Robinson Tract ............................................................. 54
Fitch Natural History Reservation ........................................... 54
Baldwin Woods ............................................................. 54
University Press of Kansas ................................................. 54
Research is an integral part of the university's educational process. The University of Kansas has more than 40 special research facilities, in addition to those in individual departments and schools. The National Science Foundation classifies KU as a major university receiving substantial research support. KU belongs to the Association of American Universities, a select group of higher education institutions in the United States and Canada. Members are chosen on the basis of national significance in graduate studies and research.

The university values the contributions of the entire campus community. Creative products and performances can be the equivalent of a scientist's journal article. Training grants across many disciplines prepare the researchers of tomorrow. Broadening the scope of knowledge in the humanities enriches the entire population. Important strides in the life sciences improve the quality of life for people with life-threatening medical conditions. Advances in information technology pave the way for improving efficiency in numerous areas. All result from research, though of different types. KU continually seeks to strengthen its research, teaching, and service missions across the disciplines through its support of the varied units of the research enterprise.

**Research Administration**

**KU Center for Research, Inc.**
President: Robert E. Barnhill, Vice Provost for Research Youngberg Hall, 2385 Irving Hill Rd., Lawrence, KS 66045-7563
(785) 864-3441, fax: (785) 864-5272, www.research.ku.edu

The KU Center for Research, Inc., is a nonprofit corporation that promotes, manages, serves, and expands the research enterprise at KU. KUCR is the authorized KU office in Lawrence for the submission and negotiation of all proposals for new or continued external support of research, instructional, and service projects. Its goals are to enlarge KU's role as a national/international leader in research and to increase the number of research areas in which KU is prominent. KUCR supports more than 40 affiliated centers, institutes, and laboratories. It makes financial investments in research through matching and start-up funds, internal competitions, funding of research positions, equipment support, infrastructure upgrades, and real estate additions. It helps prepare proposals and negotiate contracts, crafts institutional policy, and informs campus members about national policy. It conducts training programs and brokers information on funding sources. It manages technology transfer and intellectual property and communicates about research to the public.

In addition to processing and monitoring projects, an important focus at KUCR is supporting strong, interdisciplinary research projects. Investigators are encouraged to think outside the box when seeking collaborative relationships with investigators from other KU departments or from other universities around the world. To further this effort, KUCR's outreach coordinator maintains an extensive catalog of funding opportunity materials including guides, foundation reports, newsletters, and Internet and hard copy reference materials. Strategic partnerships with major regional research institutions also enhance the goal of large, cross-disciplinary research projects.

KUCR has three principal areas: Research Centers and Institutes (supporting research units), Administrative Services (proposal preparation and review, management of awards, and strategic investment), and Contract Negotiations and Compliance (handling complex contracts and compliance areas including human subjects, animal care, and conflict of interest issues).

**Research Administration**

Office of Research Administration, 6014 Wescoe Pavilion, Mail Stop 1039, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5238, fax: (913) 588-3225, www2.kumc.edu/researchadmin

The Office of Research Administration on the Kansas City campus is the authorized university representative for the submission and negotiation of all proposals for new or continued external support of research, educational, and service projects. The office helps investigators identify possible funding sources and to prepare applications for these funds and fosters the development of interdisciplinary and multidisciplinary research activities. The office publishes a newsletter listing current and potential funding opportunities, maintains reference materials, and notifies investigators of items of interest.

The office supports the Human Subjects Committee, the Institutional Animal Care and Use Committee, the College Research Committee, the Biohazards Committee, and many other committees with research-related functions. The Office of Research Administration functions as a service to and resource of KU and its investigators in all aspects of research support.
Science

Center for Environmental and Occupational Health
Director: H. William Barkman
Breidenthal Bldg., Mail Stop 1018, KU Medical Center,
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-7146, fax: (913) 588-7160, www2.kumc.edu/coeh
This interdisciplinary center evaluates the human health effects of exposure to biological, chemical, and physical hazards in the workplace and in the environment. The process includes clinical examination of individual patients, on-site evaluation of exposed populations and their environments, and toxicological research. The staff includes occupational medicine physicians, nurses, toxicologists, and an industrial hygienist. Center members and staff offer specialized skills in biochemical, clinical, and industrial toxicology; clinical pharmacology; environmental chemistry; environmental medicine; epidemiology; industrial hygiene; metals analysis; occupational health; and risk assessment.

The center coordinates the activities of KU’s mobile medical unit, which allows the Medical Center to bring clinical, preventive, analytical, and educational services to patients in communities throughout the region. The Department of Occupational Health and Environmental Medicine clinic serves as a resource for evaluation and treatment of illnesses and injuries possibly due to occupational or environmental exposures. Physicians, employers, case managers, and attorneys may refer patients, employees, or clients to this clinic to be evaluated for workplace or environmental exposures.

Center on Aging
Director: Randolph Nudo, Landon Center on Aging,
Mail Stop 1005, KU Medical Center,
3599 Rainbow Blvd., Kansas City, KS 66160
(913) 588-1203, www2.kumc.edu/coa
This interdisciplinary center provides resources for the development and conduct of aging-related research, coordinates education in geriatrics and the care of older adults, and supports model programs that demonstrate principles of geriatric care. It encourages collaboration among colleagues in the Schools of Allied Health, Medicine, and Nursing, and with affiliated institutions, geriatric and Veterans Affairs centers, and Lawrence units.

Higuchi Biosciences Centers
Director: Elias K. Michaelis, hbc@ku.edu
Higuchi Biomedical Sciences Research Area,
2099 Constant Ave., Lawrence, KS 66047-3729
(785) 864-5140, fax: (785) 864-3578, www.hbc.ku.edu
This complex comprises the Center for Biomedical Research, dedicated to basic research, and the Centers for BioAnalytical Research, Drug Delivery Research, and Neurobiology and Immunology Research, involved in the state’s economic development initiative and oriented to needs of the pharmaceutical and biotechnology industry.

The Center for Biomedical Research focuses on understanding the origin and development of disease states and on drug development. Studies concern how the body metabolizes drugs and synthesis and delivery of chemotherapeutic agents to treat Alzheimer’s disease, hypertension, viral and bacterial infections, cancer, and mental illness. Faculty are members of the Departments of Chemistry, Medicinal Chemistry, Pharmaceutical Chemistry, Pharmacology and Toxicology, and the Division of Biological Sciences.

The Center for BioAnalytical Research develops methods for ultrasensitive and selective analysis of biological substances. CBAR is part of the KU bioanalytical graduate program of the Departments of Chemistry and Pharmaceutical Chemistry.

The Center for Drug Delivery Research studies problems associated with the delivery of drugs and biotechnology products to target sites in the body and methods for overcoming these problems. CDDR faculty are members of graduate training programs in the Departments of Pharmaceutical Chemistry, Medicinal Chemistry, and Molecular Biosciences, and the School of Engineering.

The Center for Neurobiology and Immunology Research focuses on the problems of chronic, neurodegenerative diseases and immunological disorders. Scientists perform exploratory research, identify new therapeutic approaches for these diseases, and develop new technologies for related drug testing, diagnostic and pharmaceutical research, and treatment. Faculty are members of the Departments of Pharmacology and Toxicology, Chemistry, and Molecular Biosciences.

Institute for Child Development
Director: Travis Thompson, tthompson2@kumc.edu
Developmental Disabilities Center Medical Director:
Chet Johnson, (913) 588-5900, cjohnson7@kumc.edu
Mail Stop 4003, KU Medical Center,
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5588, fax: (913) 588-5916
The DDC provides service programs and interdisciplinary training for those who work with individuals who have developmental disabilities. Faculty specialties include audiology, dietetics and nutrition, nursing, occupational therapy, developmental pediatrics, physical therapy, psychology, social work, and speech pathology. Field placements are available for graduate students. Faculty members teach graduate courses. The DDC is part of the KU Center for Excellence in Developmental Disabilities program and has a Maternal Child and Health-funded Leadership Training Grant (LEND).

Kansas Biological Survey
Director: Edward A. Martinko
Takeru Higuchi Hall, 2101 Constant Ave.,
Lawrence, KS 66047-3759
(785) 864-7725, fax: (785) 864-0392, www.kbs.ku.edu
Programs and centers for basic and applied research engage survey scientists in interdisciplinary studies with other academic institutions, state and federal agencies, conservation groups, and industry. They are included in the Water Resources Division, the Land and Wildlife Resources Division, and the Information Technologies Division. These programs and centers focus on the biological diversity of the central United States, the use of animal and plant species as indicators of the health of ecosystems, the ecological relationship between agriculture and the environment, and the use of remotely sensed data and geographic information systems to monitor, assess, and manage natural resources.

Staff members have expertise in ecology, systematics, range management chemistry, statistics, and remote sensing. Most have joint or courtesy appointments in academic units or other research units. The survey...
provides unique educational and training opportunities for undergraduate and graduate students. It supports a modern water chemistry lab, remote sensing and GIS labs, and an 1,800-acre biological field station. Specimens of plants and animals gathered by survey scientists are deposited in numerous KU collections.

The survey maintains databases of information about statewide land use and land cover features, the nomenclature and distribution of Kansas plants and animals, the location and status of protected and rare species and outstanding natural areas, and nonpoint-source pollution data for more than a dozen watersheds in Kansas, Nebraska, and Iowa. The survey collaborated with the R.L. McGregor Herbarium to develop the Kansas Plant Database, one of the largest specimen-based plant databases in North America.

**Kansas Geological Survey**

Director: M. Lee Allison
Moore Hall, 1930 Constant Ave., Lawrence, KS 66047-3726
(785) 864-3965, fax: (785) 864-5317, www.kgs.ku.edu

The survey studies earth-related resources and problems in Kansas. Staff members’ investigations focus on energy, including oil, gas, coal, and alternatives; mineral industry development, including mining, reserves, and mineral economics; environmental and engineering analysis relating to land use; geologic mapping; groundwater resources, with reference to irrigation, domestic water supply, theoretical hydrology, stream/aquifer interaction, and chemical quality; and geophysics of earth materials, particularly in near-surface assessment. Expertise is available in automated cartography, data base development, and dissemination. The survey comprises offices, laboratories, instrumentation, a library, and a branch office in Wichita. It is a source of geologic and topographic maps, publications, well logs, and data files. The KGS also houses the KU Energy Research Center and the state’s Data Access and Support Center.

**Mental Retardation and Human Development Research Center**

Director: Peter G. Smith, Smith Mental Retardation Research Center, Mail Stop 3051, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5970, www2.kumc.edu/mrrc

Research at the center focuses on mental retardation and related aspects of human development. Programs center on early developmental processes, neurobiology of mental retardation, molecular biology, infant and child development, and cognitive development. Thirty-six investigators from 16 departments, together with graduate students and postdoctoral fellows, conduct basic research on issues ranging from the molecular to the behavioral level.

**Museum of Anthropology**

Interim Director: Mary Adair Spooner Hall, 1340 Jayhawk Blvd., Lawrence, KS 66045-7550
(785) 864-4245, fax: (785) 864-5243, www.anthro.ku.edu

The museum manages collections of ethnographic and prehistoric archaeological materials, primarily from the North American Great Plains and Northwest Coast, Africa, New Guinea, and Australia. These collections are available to support classroom instruction in a number of fields and to support faculty and student research.

**Natural History Museum and Biodiversity Research Center**

Director: Leonard Krishtalka, krishtalka@ku.edu
Dyche Hall, 1345 Jayhawk Blvd., Lawrence, KS 66045-7561
(785) 864-4540, fax: (785) 864-5335, http://nhm.ku.edu

The Natural History Museum houses some of the finest scientific collections in the country. In 1994, the Museum of Invertebrate Paleontology, the R.L. McGregor Herbarium, and the Snow Entomological Museum became part of the reorganized Natural History Museum as divisions of invertebrate paleontology, botany, and entomology. The merger has strengthened KU’s research and education program in systematic and evolutionary biology. Researchers have access to nearly 7 million specimens and their associated biotic data that rank KU among the top five university museums in the nation, based on research and collection support from the National Science Foundation. The museum and associated departments provide support and employment for graduate students with curatorial assistantships, research assistantships, and teaching assistantships.

Museum curators have joint faculty appointments in the Departments of Ecology and Evolutionary Biology and of Geology. Graduate students pursue research interests with internationally recognized scholars in fields such as phylogenetics, molecular systematics, biogeography, biological diversity in the New World tropics and Panarctic region, bioinformatics, and paleontology. Research resources include state-of-the-art molecular systematics and informatics laboratories, controlled environmental rooms, and specialized libraries with more than 161,000 books and reprints. World-class collections of modern and fossil plants and animals have strengths including the largest collection of insect specimens at a university west of the Mississippi River; the world’s most extensive herpetological collection from Latin America; the nation’s premier collection of Great Plains flora; the nation’s second largest paleobotanical collection; and invertebrate paleontology, mammal, and herpetology collections ranked fourth in the United States.

Public exhibits at Dyche Hall emphasize Kansas and the Great Plains. Graduate students may choose to participate in public education programs such as Summer Workshops for Young People, Weekend Workshops, and programs for school groups.

**Paleontological Institute**

Director: Roger L. Kaesler, kaesler@ku.edu
Lindley Hall, 1475 Jayhawk Blvd., Room 121, Lawrence, KS 66045-7613
(785) 864-3338, fax: (785) 864-5276, www.ku.edu/~paleo

The institute is the editorial office and co-publisher of the *Treatise on Invertebrate Paleontology*, and is developing PaleoBank, an electronic, relational database for invertebrate paleontology. Each *Treatise* volume (43 have been published since 1953, and 20 more are in preparation) aims to present a comprehensive, authoritative statement of knowledge about a group of invertebrate fossils. Contributing authors number more than 200 specialists from some 20 countries. The institute promotes interdepartmental cooperation in research and education of advanced paleontology students.
Technology

Energy Research Center
Co-directors: Timothy R. Carr and G. Paul Willhite
Executive Director: W. Lynn Watney
Parker Hall, 1930 Constant Ave., Room 108,
Lawrence, KS 66047-3724
(785) 864-4445, fax: (785) 864-5053, www.kgs.ku.edu/ERC
The center’s primary goal is to develop enhanced energy research programs serving state, regional, and national energy needs. Interdepartmental projects include petroleum discovery and recovery encompassing technology transfer, energy policy, conservation, economics, and alternative energy. The center helps faculty and staff develop and conduct energy-related research. It disseminates funding information, assists in proposal preparation, and sponsors programs on energy topics.

Information and Telecommunication Technology Center
Director: Victor Frost, info@ittc.ku.edu
Nichols Hall, 2335 Irving Hill Rd., Lawrence, KS 66045-7612
(785) 864-4896, fax: (785) 864-0387, www.ittc.ku.edu
ITTC specializes in research, development, and transfer of advanced information and telecommunication technologies. The center can research and deliver high-tech solutions in critical technology areas at the national and state levels. It is supported by industry, federal, and state programs, with research often leading to investment-grade technologies.

Research in Intelligent Systems and Information Management focuses on advanced, intelligent methodologies applied to solving problems in information identification, retrieval, analysis, and fusion. The center is the Kansas Technology Enterprise Corporation Center of Excellence for Information Technology and is involved in technology transfer and economic development.

The e-Learning Design Laboratory develops new technologies, design principles, practices, tools, and products to produce technology-enhanced learning environments.

The Lightwave Communication Systems group explores new lightwave technologies, with the aim of increasing the capacity and reliability of commercial communication networks.

The Networking and Distributed Systems group performs research to develop innovative networking and system technologies, understand their behavior, and improve their performance.

The Radar Systems and Remote Sensing Laboratory develops, evaluates, and applies new radar systems and other related technologies for remote sensing of the land, sea, ice, and atmosphere.

Wireless Communications and Digital Signal Processing researches software-configurable radio systems, signal processing algorithms, adaptive beamforming, spread spectrum, and code division multiple access systems.

Tertiary Oil Recovery Project
Co-directors: G. Paul Willhite and Don W. Green
Learned Hall, 1530 West 15th St., Room 4008,
Lawrence, KS 66045-7609
(785) 864-3001, fax: (785) 864-4967
TORP studies oil recovery processes to increase oil production efficiency from Kansas reservoirs. The project assesses the potential of tertiary oil resources, conducts field projects with oil operators, disseminates information via meetings and short courses, and trains personnel. Research includes studies of flow through porous media, polymer gelation kinetics, rheology of polymers and polymer gels, and reservoir simulation. The project involves the Departments of Chemical and Petroleum Engineering, Geology, and Chemistry; the Kansas Geological Survey; and the Kansas oil industry.

Transportation Center
Director: Joe Lee
Learned Hall, 1530 West 15th St., Room 2011,
Lawrence, KS 66045-7609
(785) 864-5658, fax: (785) 864-3199, www.ku.edu/~kutc
The center promotes transportation service and research activities for the state and region. Service activities include the Kansas Local Technical Assistance Program, the Traffic Assistance Services to Kansas project, the Kansas Rural Transit Assistance Program, and PC-TRANS, a computing support operation for transportation applications. Center-affiliated personnel provide technical expertise to the Kansas Department of Transportation, Kansas Legislature, local governments, private institutions, and public transportation providers. The center is a member of the Mid-America Transportation Center, a five-university consortium promoting transportation research, education, and training.

Research projects have dealt with public transportation in low-density areas, traffic safety and engineering, transportation planning and land use implications, transportation needs of older people, transit-use analysis, transportation investment’s effect on growth, pavement management and material innovations, liability issues facing local highway agencies, GIS applications in transportation, and the transport of hazardous materials. The center participates in K-TRAN, a cooperative research program with KDOT and Kansas State University.

The center publishes a quarterly newsletter on issues affecting highway agencies in Kansas and the region, a quarterly newsletter on rural public transportation, and a national quarterly magazine on microcomputing applications in transportation. It sponsors conferences and workshops on transportation topics.

Behavioral Sciences

Center for Research on Learning
Director: Donald D. Deshler
J.R. Pearson Hall, 1122 West Campus Rd., Room 521,
Lawrence, KS 66045-3101
(785) 864-4780, fax: (785) 864-5728, www.ku-crl.org
The center conducts research to enhance the learning and performance of individuals in school and non-school settings. It is concerned with validation of assessment and instructional practices that can be used with diverse groups. It translates the validated procedures into instructional materials. The center operates an international network to train educators throughout the world to use the products of its research.

The Institute for Effective Instruction studies underlying factors related to learning disabilities and intervention procedures for enabling people to cope. The Division of Adult Studies conducts research on adult literacy, policy development and implementation, and pro-
program design in light of the life-long learning needs of adults with disabilities. The Advanced Learning Technologies group studies ways to improve student performance by integrating advanced technologies and education. The e-Learning Design Laboratory studies and develops online instruction with an underlying commitment to identifying and institutionalizing the elements of online teaching that are inherent in a mature pedagogy.

Researchers, faculty, and doctoral students come primarily from the Departments of Special Education, Teaching and Leadership, Psychology and Research in Education, Speech-Language-Hearing; Sciences and Disorders, Human Development and Family Life, and Electrical Engineering and Computer Science.

Schiefelbusch Institute for Life Span Studies
Director: Steven F. Warren
Dole Center, 1000 Sunnyside Ave., Room 1052, Lawrence, KS 66045-7555
(785) 864-4295, fax: (785) 864-5323, Voice/TTY: (785) 864-5051, www isi ku edu

The institute provides program development on disabilities, human and community development and aging, assistance in project development, administrative and grants management, and communication and technical services. It serves some 200 research scientists on the Lawrence and Medical Center campuses, Parsons Research Center, and Juniper Gardens Children’s Project in Kansas City. It comprises 12 centers conducting more than 100 funded research, training, and demonstration projects supported by federal grants. Projects in laboratories, community settings, homes, schools, and institutions foster research and clinical training for students.

The Kansas Mental Retardation and Developmental Disabilities Research Center conducts behavioral and biomedical research into the causes and prevention of mental retardation. The Kansas University Center on Developmental Disabilities provides training for practitioners, service providers, parents of children with disabilities, and students preparing for human service careers. Juniper Gardens Children’s Project conducts research with children and families in an economically deprived community. The Gerontology Center studies adult development and aging in a range of environments with diverse populations. The Merrill Advanced Studies Center supports scientific dialog among world-class experts at events that highlight important new discoveries and directions for life span research. It promotes collaboration, joint publications, and continued contact. The Beach Center on Disability includes projects for families with children or adult members with special needs. The Research and Training Center for Independent Living studies and develops self-advocacy and independent living systems for people of all ages who have physical and developmental disabilities. The Life Span Institute at Parsons in southeast Kansas focuses on assistive technology services, trains service providers on best practices regarding individuals with developmental disabilities, and conducts mental retardation research. The Work Group on Health Promotion and Community Development is concerned with how communities can initiate and sustain positive behavioral changes related to public health and development issues. The Center for Physical Activity and Weight Management supports research, training, and outreach on weight loss and weight maintenance.

Business and Government

Center for International Business Education and Research
Director: Melissa Birch
Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS 66045-7585
(785) 864-3125, www.business ku edu/kuciber

The center is one of 30 CIBERs designated by the U.S. Department of Education as national resources in international business. CIBER is responsible for international programs in the School of Business, including developing and providing international business-related courses, internships, and foreign study opportunities; promoting research and overseas experience; and serving as an information and educational resource to the region’s international business community as well as to other colleges and universities.

CIBER collaborates on many research and educational programs with KU’s area studies centers and foreign language departments and the Schools of Engineering, Law, and Journalism and Mass Communications. Students interested in international business have many options including short-term overseas seminars, longer-term study in many countries, business courses on particular world regions and languages, advanced international business seminars, and field projects for credit. An M.B.A. concentration in international business and joint M.B.A./M.A. degrees in Latin American Studies or Russian and East European Studies are offered.

Robert J. Dole Institute of Politics
Director: Richard Norton Smith
2350 Peteish Dr., Lawrence, KS 66045
(785) 749-3911, fax: (785) 749-3907, www.doleinstitute org

The Robert J. Dole Institute of Politics works with other KU units and the community to offer programs addressing policy issues and encouraging public service. The institute, whose west campus building was dedicated in July 2003, houses extensive exhibits as well as the papers of former Senator Bob Dole. With 4,000 linear feet of documents, the Dole collection is the largest congressional archive in existence, making the institute a major facility for research into the politics and policies of the 1960s through the 1990s. The institute sponsors high-profile events such as the Dole Lecture each April, an annual Dole Leadership Prize, and the Presidential Lecture Series each November.

Policy Research Institute
Director: Stephen Maynard-Moody
Blake Hall, 1541 Lilac Lane, Room 607, Lawrence, KS 66044-3177
(785) 864-3701, fax: (785) 864-3683, www ku edu/pri

The Policy Research Institute brings together university researchers with expertise in economics, environmental studies, health studies, metropolitan studies, international conflict, and other disciplines. PRI links the university; state, local, and national governments; the business community; and the citizens of Kansas. PRI research projects are funded by the federal government, private foundations, corporations, and state and local governments.

The institute has four research centers: the Center for Economic and Business Analysis, the Center for International Political Analysis, the Center for Metropoli-
THE UNIVERSITY OF KANSAS  •  2003-05 GRADUATE SCHOOL CATALOG

The Lied Center of Kansas houses a 2,020-seat performing arts hall with excellent acoustic quality and technical production capabilities. It offers a venue for Department of Music and Dance productions, Student Union Activities shows, university and community events, and the Lied Center Series, including the Concert Series, Swarthout Chamber Music Series, New Directions Series, World Series, Broadway and Beyond Series, and the Lied Family Series. The Russian State Opera in Tosca, the National Symphony of Mexico, Peking Opera, the St. Petersburg String Quartet, and Ragamala Music and Dance Theatre flavored a recent season. Styles are equally wide-ranging: from Russian concert pianist Olga Kern to Sweet Honey in the Rock; from the multimedia fusion of Brown Butterfly to national tours of Rent and South Pacific.

Web sites for the University Theatre, www.kutheatre.com, the Lied Center of Kansas, www.ku.edu/~lied, and the Department of Music and Dance, www.ku.edu/~sfa/mad, have information about upcoming performances and recitals.

Spencer Museum of Art
Director: Andrea Norris
Spencer Museum, 1301 Mississippi St.,
Lawrence, KS 66045-7500
(785) 864-4710, fax: (785) 864-3112, www.ku.edu/~sma
A comprehensive 21,000-work collection spans the history of European and American art from antiquity to the present and includes broad and significant holdings of East Asian art. Strengths include medieval sculpture, early Renaissance painting, European baroque art, 19th- and 20th-century painting, photography, old master prints, American quilts, small sculpture, Japanese painting and prints of the Edo period, 20th-century Chinese painting, Korean ceramics, and Asian textiles. The museum organizes or sponsors significant exhibitions, for example: The Gilded Age: Treasures from the Smithsonian American Art Museum; Contemporary Art from Cuba; American Indian Traditions Transformed; Remembering the Family Farm: 150 Years of Prints; Ming Painting Through the Eyes of Connoisseurs; and Prints and Drawings by Günter Grass. The exhibitions are supplemented by varied education programs for school children, KU students, and the public.

Humanities

Joyce and Elizabeth Hall Center for the Humanities
Director: Victor Bailey, hallcenter@ku.edu
Watkins Home, 1540 Sunflower Rd., Room 211, Lawrence, KS 66045-7618
(785) 864-4798, fax: (785) 864-3884, www.hallcenter.ku.edu
This center fosters interdisciplinary study in the humanities through lecture series, panel discussions, workshops, and seminars for faculty members and graduate students. Humanities Research Fellowships, travel grants, and other awards are available for faculty members. The Humanities Lecture Series brings three internationally known speakers in the arts and humanities to campus each year. The center helps prepare and administer research grants for faculty members and graduate students. The center publishes KU’s humanities journals, a newsletter, and an annual report.
Research Support

Academic Computing Services
Associate Vice Provost: Donna Liss, question@ku.edu
Computer Center, 1001 Sunnyside Ave., Lawrence, KS 66045-7520, (785) 864-0100,
Computing Help: (785) 864-0200, www.ku.edu/acs
ACS facilitates the use of information technologies in teaching and research for students, faculty, and staff.

Electronic Mail. ACS provides free e-mail services to the KU community. An Exchange environment provides e-mail, calendars, and shared folders for collaboration and course work. E-mail distribution lists can be generated from KU databases; these are automatically updated nightly. Information about Exchange is available at www.ku.edu/exchange. Individuals can register for e-mail service at www.ku.edu/computing/services.

KU Web Site. ACS develops and maintains KU’s Web site, www.ku.edu, and provides Web page space for departments, students, faculty, and staff. Course Web pages also are supported, including the BlackBoard environment. Individuals can register for personal Web page space at www.ku.edu/computing/services.

Shared Computing Resources. ACS provides general-purpose Unix systems supporting Web site development and programming and high-performance Unix systems supporting a full range of statistical and mathematical packages and libraries. See www.ku.edu/acs/systems/lark.shtml for information. An SGI 2000 supercomputer is available for approved research activities; see www.ku.edu/acs/systems/heron.shtml for information.

Computer Labs. ACS computer labs are open to all KU students. Labs feature Windows and Macintosh computers, laser printing, and a full array of software from Internet and word processing to statistical, digital audio/video, and graphics. Lab use is free, but students must provide their own paper for black-and-white laser printing. Labs are wheelchair accessible, and one supports systems to assist the visually impaired. Other units operate labs that are restricted to students enrolled in specific courses or programs. For current information and lab hours, see www.ku.edu/~acs/labs.

Computing Workshops. ACS offers workshops on topics including Outlook, Web site development, multimedia authoring, office, and statistical software. Workshops are free to KU faculty, staff, and students and range from one-hour demonstrations to hands-on workshops that run from two to three hours. New topics and sessions are added each semester. See www.ku.edu/acs/training for information and schedules.

Computer-based Training. ACS offers more than 100 Web-based computer training courses for people at all levels of knowledge. The modules offer self-paced training and range from in-depth tutorials for applications like Microsoft PowerPoint to technical training in HTML or JavaScript. CBTs are free to KU faculty, staff, and students and can be accessed online 24 hours a day, seven days a week. To take a course, see www.ku.edu/acs/cbt.

Computing Help. See www.ku.edu/acs for a complete description of the resources available.

Internet1 and Internet2. ACS was a founding member of the Kansas Research and Education Network and the Great Plains Network and connects to Internet1 and the Abilene Network, Internet2, through KanREN and GPN. ACS coordinated the NSF grant requests that funded the formation of KanREN and GPN and remains active in these groups and in the University Consortium for Advanced Development, the parent organization of Internet2. See www.ku.edu/acs/kurole.shtml.

Biometry and Computer Research Facilities
Chair: Khatab M. Hassanein
G034 Olathe Pavilion,
Mail Stop 3042, KU Medical Center,
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5566, fax: (913) 588-5567,
www3.kumc.edu/ biometry

The Department of Biometry assists faculty and staff members and students with the planning, management, analysis, and presentation of research data. Statisticians work with computer specialists to provide a full range of research and computer services. Scientific software and other biostatistical resources are available.

Environment, Health, and Safety
Director: Michael J. Russell
Burt Hall, 1540 West 15th St., Room 140,
Lawrence, KS 66045-7610
(785) 864-4089, fax: (785) 864-2852, www.ehs.ku.edu
EHS helps faculty, and staff, and students minimize environmental, health, and safety risks associated with their research efforts. EHS monitors campus activities to ensure that applicable federal, state, local, and university environmental, health, and safety laws, regulations, ordinances, and policies are being considered and followed.

EHS works with the campus EHS Council and its committees (Committee on Environment, University Safety and Health Committee, and Laboratory Safety Committee) to develop, recommend, and implement appropriate policies, procedures, and programs. Research using hazardous materials (i.e., biohazards, chemicals, lasers, radioactive materials, recombinant DNA) requires prior approval. Committees review research proposals to assure that research is consonant with university, local, state, and federal guidelines. Many faculty, staff, and students make up the EHS Council and its committees and are involved in this review.

Experimental Program to Stimulate Competitive Research
KU Coordinator: Robert Collins, rcollins@ku.edu
Youngberg Hall, 2385 Irving Hill Rd., Room 207,
Lawrence, KS 66045-7563
(785) 864-7400, fax: (785) 864-5019
EPSCoR promotes research competitiveness in states that have been historically below the national average in per capita federal research funding. It enhances the ability of investigators at the major research universities in Kansas—the University of Kansas, Kansas State University, and Wichita State University—to compete for federal and private funding. This is achieved by grants to researchers early in their careers, by focusing research support in areas of special relevance and potential in Kansas, and by improving research infrastructure at these institutions. Federal agencies that participate in Kansas EPSCoR programs include the National Science Foundation, the National Aeronautic and Space Administration, the Department of Defense, the Department of Energy, and the Environmental Protection Agency.
Kansas Cancer Institute
Director: William Jewell
4030 Robinson Hall, Mail Stop 1027, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-4700, fax: (913) 588-4701, wwww2.kumc.edu/kci

KCI is committed to finding cures for cancer. Basic research scientists, clinicians, and faculty members have proven track records, both nationally and internationally, and they are dedicated to developing and maintaining programs that focus on research, prevention, education, and patient care. Clinicians at KU Med are engaged in programs that foster early diagnosis of such malignancies as breast and prostate cancer. Others are testing new methods of treating various kinds of tumors.

KCI offers a multidisciplinary environment that nurtures research and educational activities. It promotes a high degree of coordination, interaction, and collaboration among researchers, clinicians, and students. Having cancer scientists and clinicians working together under one roof is unique in Kansas. This setting yields the rapid transfer of the most promising research findings from the bench to the bedside via clinical trials.

Lives depend on cancer research, and knowledge—stemming from both basic and clinical research—is part of the cure. The diverse backgrounds and expertise of investigators enable them to apply a multidisciplinary approach. Researchers are learning more about cancer through the development of programs such as hormonal carcinogenesis studies, high-risk breast cancer investigations, clinical trials, pediatric hematology, signal transduction and molecular carcinogenesis research, chemoprevention investigations, skin carcinogenesis research, and gene therapy research.

Nearly all of Kansas’ 133 hospitals now report cancer cases to the center’s Kansas Cancer Registry. Case records of more than 300,000 patients are in the files, containing data on site, histology, and stage of cancer at diagnosis, as well as some treatment and quality-of-life information. Information is received from pathology labs, independent radiation centers, and other health care providers, as required by Kansas law. Kansas Cancer Registry also has data exchanges with other neighboring state registries.

Kansas Research and Education Network
Executive Director: Doug Heacock
Computer Center, 1001 Sunnyside Ave. (first floor), Lawrence, KS 66045-7520
(785) 864-0422, fax: (785) 864-0485, wwww.kanren.net

KANREN is a nonprofit education and research consortia operating as a service unit of the KU Center for Research, Inc. KANREN operates a statewide IP network backbone and provides Internet access for its member institutions, including all Regents universities, most Kansas community colleges, private colleges and universities, and a growing number of public school districts and other Kansas nonprofit organizations. KANREN also provides access to Internet2 (through a connection with the Great Plains Network for Earth Systems Science) for those KANREN member institutions that are also members of the Internet2 consortium.

Microscopy and Electronic Imaging Laboratory
Directors: Bruce Cutler, bcutler@ku.edu
William Dentler, wdentler@ku.edu
Haworth Hall, 1200 Sunnyside Ave., Room 4002, Lawrence, KS 66045-7534
(785) 864-4140, wwww.ku.edu/~bcutler/emlab

The laboratory provides state-of-the-art scanning and transmission electron microscopes and light microscopes equipped with fluorescence and DIC optics. It provides facilities for computer-assisted image analysis and 35-mm. slide making. Services and equipment are available to all university and community personnel. Major users include researchers from the biological, engineering, geological, and pharmaceutical sciences. The scanning electron microscope is equipped with an energy dispersive X-ray elemental analysis system, a backscatter electron detector, an EBSP detector, and a cathodoluminescence detector. A laser scanning confocal microscope and a microscope equipped for digital image capture and deconvolution microscopy are provided for high-resolution capture and analysis of fluorescently labeled specimens. A microscope equipped for digital capture and analysis of specimens using differential interference contrast imaging is also provided. Staff members assist and train users in appropriate experimental design, specimen preparation, data interpretation, and computer and instrument usage.

Molecular Structures Group
wwww.ku.edu/~msg

The MSG manages shared instruments and computers used for determining molecular structure. The staff includes specialists in the techniques currently represented and technical personnel. They work collaboratively with faculty members and students, acquire data for users, train users to operate the instruments, help with planning experiments and interpreting the data, and frequently are co-authors on publications and investigators on grant proposals. The laboratories work together closely on solutions to specific technical problems and on planning and setting priorities for future instrument acquisitions. The MSG is overseen by a steering committee of faculty members and laboratory directors. Instrument operation and maintenance are underwritten by user fees.

Biochemical Research Service Laboratory
Director: Michail A. Alterman, malterman@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 6038, Lawrence, KS 66045-7582
(785) 864-4166, wwww.brsl.ku.edu

BRSL assists KU research groups. The laboratory can culture microorganisms; purify and characterize enzymes and other biological materials; and perform amino acid analysis, MALDI-TOF MS, DNA sequencing, peptide synthesis, HPLC separations, and phosphorimaging. Staff members consult with research groups and provide training in biochemical techniques.

Mass Spectrometry Laboratory
Director: Todd Williams, twilliams@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 3006, Lawrence, KS 66045-7582
(labs: B025 and 3007 Malott Hall)
(785) 864-3223, wwww.ku.edu/~msg/mass.html
The MSL provides chemical analysis by mass spectrometry to researchers, primarily from chemistry-related departments and the Medical Center. Most samples are synthetic compounds, natural products, and small biopolymers. A variety of ionization methods and high performance mass analyzers are used. Staff members consult with users.

**Molecular Graphics and Modeling Laboratory**  
Director: Gerry Lushington  
Malott Hall, 1251 Wescoe Hall Dr., Room 3021,  
Lawrence, KS 66045-7582 (lab: 3058 Malott Hall)  
(785) 864-1140, fax: (785) 864-2156,  
www.msg.ku.edu/~msg/mgm.html

Molecular modeling involves computer simulations of the structure and properties of biomolecular systems. Interactive graphics and visualization tools allow users to construct and submit such simulations and to analyze complex open multidimensional results. The MGM laboratory provides access to high-performance computational tools. It supports KU researchers through consultation, technology transfer, and training in the application of computational chemistry approaches to their specific problems. Lab resources include one SGI 02 and three SGI Octane workstations, a Dell PC, a 16-processor Athlon cluster capable of large-scale parallel simulations, and an HP 2500CM large-format PostScript ink-jet printer. Software includes numerous programs from Tripos Associates (e.g., SYBYL, UNITY, FlexX), the InsightII/Discover/BioPolymer (and part of the Cerius2) suites from Accelrys Inc., Gaussian 98, AMBER, Quanta, CHARMM, the Cambridge Crystallographic Database, and a large collection of freeware packages.

**Nuclear Magnetic Resonance Laboratory**  
Director: David Vander Velde, dvandervelde@ku.edu  
Malott Hall, 1251 Wescoe Hall Dr., Room 3001,  
Lawrence, KS 66045-7582 (labs: B042 and 3002 Malott, 148B LSRL, 11 Higuchi)  
(785) 864-4187, labs: (785) 864-4231, fax: (785) 864-5326,  
www.msg.ku.edu/~msg/nmr2.html

The NMR lab maintains the high-field NMR spectrometers; trains users; provides spectra on a service basis; and helps users with design, execution, and interpretation of NMR experiments. Its capabilities extend from small molecules to isotopically enriched proteins, solids, and flow samples.

The most recent additions are medium field instruments, a General Electric QE Plus system, and a Bruker Avance 400 with a flow injection automation system and probe for autosampling from 96 well plates. Two instruments are managed principally for self-service rapid turnaround of routine samples: a Bruker DRX-400 and a GE QE Plus (300 MHz). Most graduate students whose projects involve synthesis or chemical characterization are trained to use one or more of these instruments early in their studies. Accessibility is excellent. The lab also houses several other Silicon Graphics, Sun, and Linux workstations for off-line processing and plotting NMR data from the instruments.

The NMR lab underwent a $1.1-million expansion in solution and LC-NMR. It upgraded an existing 500 MHz instrument to a Bruker Avance system with similar capabilities, plus a high-resolution solids probe for proton spectra of mobile molecules in solid samples. The 500 and 600 also support structural and conformational studies of medium-sized molecules in solution. The lab anticipates acquiring an 800 MHz instrument in 2004, giving KU one of the best-equipped and most modern NMR facilities in the region.

**X-ray Crystallographic Laboratory**  
Director: Douglas Powell, dpowell@ku.edu  
Malott Hall, 1251 Wescoe Hall Dr., Room 6044,  
Lawrence, KS 66045-7582  
(785) 864-4347, fax: (785) 864-5396,  
www.msg.ku.edu/~xraylab

This laboratory maintains and operates shared X-ray diffractometers, trains users in crystallographic methods, and assists with the interpretation of crystallographic results. Data for small-molecule single-crystal studies are measured on a Bruker diffractometer with a SMART Apex ccd area detector. This instrument can be used to perform both routine crystal structure determinations and charge density analyses. A Bruker D8 Discover powder diffractometer is available for identification and determination of polycrystalline samples.

**Regional Libraries and Museums**

The Nelson-Atkins Museum of Art in Kansas City, Missouri, <www.nelson-atkins.org>, offers Asian art collections that are among the world's best, as well as fine collections of contemporary art, American painting, and old master paintings of the 15th, 16th, and 17th centuries. Also in Kansas City is the Linda Hall Library, <www.lindahall.org>, outstanding for its scientific and technological materials.

In Topeka, Kansas State Historical Society (<www.kshs.org>) resources include the Kansas Museum of History and the Center for Historical Research, which provide early Kansas periodicals and other archival materials.


**Research Animal Programs**

**Lawrence Campus: Animal Care Unit**  
Director: James F. Bresnahan  
Malott Hall, 1251 Wescoe Hall Dr., Room B054,  
Lawrence, KS 66045-7582  
(785) 864-5587, fax: (785) 864-5305, <www.kumc.edu/lar>

**KU Medical Center: Research Support Facility**  
Director: David Pinson  
Mail Stop 1031, KU Medical Center,  
3901 Rainbow Blvd., Kansas City, KS 66160  
(913) 588-7015, fax (913) 588-7277, <www.kumc.edu/lar>

Policies concerning animals used in research, teaching, and public education programs are set by animal care committees composed of faculty, staff, and community representatives. All three programs are fully accredited by the American Association for Accreditation of Laboratory Animal Care.
University Libraries
Dean: Stella Bentley
Watson Library, 1425 Jayhawk Blvd., Room 502, Lawrence, KS 66045-7544
(785) 864-3956, www.lib.ku.edu
Library collections at KU contain more than 3.8 million volumes. The University Libraries system maintains more than 33,000 current periodical subscriptions 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 seven library facilities. Most science and business materials are in the Anschutz Library, which also houses government publications (U.S. and international) 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. Spencer Research Library holds outstanding 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), and the KU Edwards Campus Library in Overland Park, Kansas.

Materials not owned by KU libraries can be requested from other libraries worldwide through the interlibrary service. The libraries provide services for users with disabilities. For general information, call (785) 864-3956, or visit the Web site above.

Clendening History of Medicine Library
1020 Robinson Hall, Mail Stop 1024, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-7244, http://clendening.kumc.edu
Clendening library has one of the top collections of rare medical books in the country. Many of its more than 25,000 volumes are first or early editions of important works of medical literature.

Dykes Library for Health Sciences
1004 Dykes Library, Mail Stop 1050, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5070, http://library.kumc.edu
Dykes library provides a collection of more than 170,000 books, journals, and microforms with online catalogs and medical abstract databases such as MEDLINE. Reference librarians help students find information, conduct research, formulate research strategies, and use resources.

Law Library
Green Hall, 1535 West 15th St., Room 200, Lawrence, KS 66045-7577 (785) 864-3025, www.law.ku.edu/library
The Wheat Law Library maintains collections and services geared to the needs of the faculty members and students of the KU School of Law. The library holds more than 370,000 printed volumes and maintains nearly 4,000 journal subscriptions. Law students have access to a number of computerized resources for legal research.

University of Kansas Field Station and Ecological Reserves (KSR)
Director: Edward A. Martinko
Takeru Higuchi Hall, 2101 Constant Ave., Lawrence, KS 66047-3904
(785) 864-7725, fax: (785) 864-3982, www.ksr.ku.edu
KSR, KU’s biological field station, has about 1,800 acres of tallgrass prairie, oldfield, wetland, forest, successional woods, and land under agricultural management. Research facilities include two laboratories, a workshop, a caretaker residence, a lath house, and irrigated garden areas. All tracts are within 15 miles of the Lawrence campus, including a 1,500-acre area north of campus. Researchers study population dynamics of plants, insects, fishes, and rodents; genetic variation in populations of plants and animals; landscape ecology; and effects of manipulations on terrestrial and aquatic ecosystems.

Field headquarters are at the 618-acre Nelson Environmental Study Area, devoted to experimental ecology. NESA researchers use 100 experimental ponds and a small lake and protected watershed to study aquatic ecology. A Biotic Succession/Habitat Fragmentation facility at NESA allows study of secondary succession in a fragmented landscape. The 160-acre Rockefeller Experimental Tract is a long-term study of prairie restoration and conservation. The 116-acre Hall Nature Reserve and the 108-acre Robinson Tract provide additional native and managed habitats for research. The 590-acre Fitch Natural History Reservation is a nature preserve protected from disturbance for more than 50 years. Three KSR tracts comprise a 200-acre block in the Baldwin Woods area of relatively undisturbed oak-hickory forest.

Staff members are based at NESA and manage facilities and help implement research projects. Various databases are maintained, including climate data, species occurrences, publications, and records of land use. Coverages for spatial analyses with geographic information systems are available, as are aerial photographs, synoptic collections, and maps. In a typical year, about 40 faculty members and 30 graduate students from KU and elsewhere use KSR for research. KSR is administered by the Kansas Biological Survey.

University Press of Kansas
Director: Fred M. Woodward, upress@ku.edu
2501 West 15th Street, Lawrence, KS 66049-3904
(785) 864-4154, fax: (785) 864-4586, www.kansaspress.ku.edu
The University Press of Kansas is a scholarly book publisher operated as a consortium by the six Regents universities in the state. It is one of 120 members of the Association of American University Presses. Since its founding in 1946, the press has published more than 1,031 titles. The press publishes scholarly and regional books that serve both the academic community and society as a whole. It invites submissions from authors. Books are approved for publication by the staff and an editorial board composed of two faculty members from each supporting university. The staff is available to faculty members for consultation on publishing matters.
School of Allied Health

Karen L. Miller, Dean
Mail Stop 2007, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5235

Biometry ................................................... 57
  Biometry Courses ........................................... 57
Clinical Laboratory Sciences ...................... 57
  Clinical Laboratory Sciences Course ............ 57
Communicative Disorders: Intercampus Program .................................................... 57
  Hearing & Speech, KU Medical Center ......... 57
  Speech-Language-Hearing: Sciences & Disorders, Lawrence .............................................. 57
  Audiology Courses ........................................... 57
Dietetics & Nutrition .................................... 57
  Admission ................................................................. 57
  Dietetics & Nutrition Courses ..................... 57
Hearing & Speech ...................................... 60
Neurosciences ............................................ 60
Nurse Anesthesia ........................................ 60
  Program ................................................................. 60
  Entry-to-practice Program ......................... 60
  General Admission Requirements ................ 60
  Degree Requirements ........................................... 60
  CRNA Degree Completion Program ............... 60
  Advanced-standing Admission Requirements .. 60
  Degree Requirements ........................................... 60
  Nurse Anesthesia Courses ......................... 61
Occupational Therapy ............................... 63
  Master of Occupational Therapy .................. 63
  Admission ................................................................. 63
  Master of Occupational Therapy Degree Requirements ........................................... 63
  Typical Course Sequence ............................. 64
  Master of Science in Occupational Therapy .... 64
  General Admission Requirements ................ 64
  M.S. Degree Requirements ............................. 64
  Ph.D. in Therapeutic Science ....................... 64
  Admission ................................................................. 64
  Curriculum ......................................................... 65
  Occupational Therapy Courses .................... 65
  Therapeutic Science Courses ..................... 66
Physical Therapy & Rehabilitation Science ... 66
  Doctor of Physical Therapy ......................... 66
  M.S. in Physical Therapy .................... 66
  General Admission Requirements ................ 66
  Degree Requirements: Professional Program .. 66
  Ph.D. in Rehabilitation Science ................... 66
  Admission Requirements ............................. 66
  Degree Requirements ........................................... 66
  M.S./Ph.D. Joint Degree Program ................. 66
  Physical Therapy Courses ......................... 66
Special Education ................................... 69
A

Admission requirements are the general requirements of the Graduate School. Individual graduate programs have specific requirements including pre-requisite undergraduate courses. These are listed or referenced in program descriptions.

The School of Allied Health offers these degrees, in cooperation with other academic units:

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

For more information about graduate programs, see www.kumc.edu/allied/programs.html or alliedhealth.kumc.edu/programs.html.

Clinical Laboratory Sciences

No graduate program is offered, but the following course can be taken for graduate credit.

Clinical Laboratory Sciences Course

CLLS 705 Fundamentals of Pathophysiology (3-4). 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 Physical Therapy Program or permission of the instructor(s). LEC

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 below.

Hearing and Speech, KU Medical Center:
John Ferraro, jferraro@kumc.edu
3031 H.C. Miller Building, Mail Stop 3039
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-5937
http://alliedhealth.kumc.edu/programs/hearing.htm

Biometry

Chair: K.M. Hassanein
G034 Olathe Pavilion
Mail Stop 3042, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-5566
Professor: K.M. Hassanein
Professor Emeritus: R.S. Hassanein
Assistant Professor: E.F. Brown
No graduate program is offered in biometry, but the following courses may be taken for graduate credit.

Biometry Courses

BMTR 800 Special Topics in Biometry: _____ (1-3). Advanced courses on special topics in biometry given as the need arises. IND

BMTR 811 Principles of Statistical Inference (3). A graduate level introductory course in biostatistics. Measures of central tendency and dispersion; probability distributions: binomial, poisson, normal. Confidence intervals and testing of one and two sample hypotheses. Non-parametric methods, correlation, regression, categorical data analysis and analysis of variance. LEC

BMTR 812 Research Methodology and Statistical Application (3). Research considered from a statistical point of view, including definition and types of research, strengthening nonexperimental hypotheses, and special considerations for clinical studies. Reliability and validity. Vital statistics techniques, hypothesis construction, statistical significance and power. Basic statistical techniques, introduction to multivariate applications: factor analysis, multiple linear and logistic regression; Cox models. Relating research data to computer. Course content available to students via computer-aided instruction. Second part of course involves student presentations of draft research proposals to class, emphasizing research design and statistics. Prerequisite: BMTR 811 or equivalent, or permission of instructor. LEC

BMTR 813 Applied Nonparametric Statistics (3). The use of statistical tests in research. Tests for the single sample case. Tests for one sample, two measures or two replicates. Test for two independent samples. Test for the case of K related sample. Tests for case of K independent samples. Measures of association and their tests of significance. LEC
Communicative Disorders: Intercampus Program; Dietetics & Nutrition

Speech-Language-Hearing: Sciences and Disorders, Lawrence: Steven M. Barlow, sbarlow@ku.edu
Dole Center, 1000 Sunnyside Ave., Room 3001
Lawrence, KS 66045-7555, (785) 864-0630
www.lsi.ku.edu/ipcd or www.ku.edu/~splh

Professors: Barlow, J. Brandt, Catts, Ferraro, Fey, Rice, Wilcox

Courtsey Adjunct Professors: Brady, S. Brandt, McLennan, Seaverton, Storms

Professors Emeriti: Bowlie, Diedrich, Marston, McLean, McReynolds, Michel, Salmon, Schiefelbusch

Associate Professors: Carpenter, Chertoff, Jackson, Loeb, Trullinger, Widen

Clinical Associate Professor: Wegner
Assistant Professors: Ferguson, Storkel

Clinical Assistant Professor: Bunce

Clinical Instructors: Banks, Cuny, Daniels, Gatts, Haring, Keener, Kieffer, Wood Jackson, McCall, Nicholson

Audiology Courses

For courses in Speech-Language Pathology, see the College of Liberal Arts and Sciences chapter.

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

AUD 697 Audiology I (3).

AUD 803 Communication Problems of the Acoustically Handicapped (3). The development and application of the principles of language learning as they affect the child with a mild to severe hearing loss. 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 including 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 between common acoustic stimuli and the responses they elicit, the effects of sensory scale, noise, and hearing loss. 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. Prerequisite: AUD 810 and AUD 813. LAB

AUD 817 Pediatric Audiology (3). Normal and pathological development of the auditory system; pediatric audiometric testing; auditory and communication aspects in the habilitation of hearing-impaired children. Prerequisite: AUD 697 and AUD 829. LAB

AUD 818 Vestibular Systems and Disorders (2). Study of the anatomy and physiology of the normal peripheral and central vestibular system; clinical assessment of vestibular disorders; vestibular rehabilitation. LEC

AUD 819 Hearing Aids I (3). Study of the components, function, fitting, and performance characteristics of hearing aids, applications of amplification in rehabilitative audiology. Prerequisite: AUD 697 and AUD 810. LEC

AUD 820 Rehabilitative Audiology (3). Principles and methods of auditory, communication, 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, techniques, 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 819. 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 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 University and/or University Medical Center audiology clinics, or affiliated, off-campus practicum sites. Prerequisite: Permission of instructor. FLD

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

AUD 848 Seminar in Research Process in Speech Pathology and Audiology (3). This seminar will involve study and discussion of text and journal materials pertaining to the philosophy and methodology of research and their application in the fields of speech pathology and audiology. Students will be required to conduct one or more experiments involving formulation of questions, data gathering, statistical analysis, and report writing. Prerequisite: SPLH 860. LEC

AUD 849 Clinical Practice with the Hearing Impaired (1-3). Students provide rehabilitative services, language, and educational evaluations for children and adults with all types of hearing disorders under the supervision of certified staff. Group and individual conference with staff required. Prerequisite: AUD 795, AUD 842, and permission of instructor. FLD

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

AUD 899 Thesis (1-10). RSH

AUD 940 Seminar in Audiology: _____ (1-4). Advanced study of selected topics in audiology such as (but not limited to): cochlear micromechanics and other physiological processes; psychoacoustics, speech perception, cochlear implants, etc. Prerequisite: Enrollment in the Audiology Ph.D. program or permission of instructor. LEC

AUD 944 Advanced Clinical and Experimental Technique in Audiology (1-6). FLD

AUD 947 Seminar in the Clinical Process in Speech Pathology and Audiology (3). This course will be concerned with the advanced study of the clinical process in the diagnosis and rehabilitation of individuals with speech and hearing problems. The course will focus on the critical evaluation of clinical literature and practices. Prerequisite: SPLH 880. LEC

AUD 999 Doctoral Dissertation (1-12). RSH

The following course is cross-referenced as available to or recommended for students in Audiology:

SPED 718 Instructional Planning for Exceptional Children and Youth: _____

Dietetics and Nutrition

Interim Chair and Graduate Adviser: Janice E. Harris, jkharris@kumc.edu, (913) 588-7652
4015 Delp Pavilion
Mail Stop 4013, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
Dietetic Internship Director: Rachel Barkley, rbarkley@kumc.edu, 4065 Delp Pavilion, (913) 588-7683
Professor: Carlson

Professor Emeritus: Frakes

Associate Professors: Barkley, Beyer, Harris, Sullivan

Assistant Professor: Hise

For help finding course descriptions, see the Directory of Courses, pages 5-6.
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.

An applicant to the M.S. program must be a Registered Dietitian, be registry eligible, or have a bachelor’s degree from a regionally accredited university or college with at least one 3-credit-hour course each in biochemistry, physiology, and nutrition.

### Dietetics and Nutrition Courses

**DN 601 Current Concepts in Clinical Nutrition** (2)

**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 diet, food habits, and nutrition. The role of the community and its agencies will be considered. Includes field work. Prerequisite: 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. Prerequisite: By permission of instructor only. LEC

**DN 803 Selected Topics in Resource Management for Nutrition Care Delivery Systems** (1-3)

Topics will address the efficiency and effectiveness of the use of dietetic resources to accomplish organizational objectives. Students may enroll in one or more topics for a total of 3 credit hours. Prerequisite: Consent of instructor. LEC

**DN 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 822 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 food service systems, management theory, or commensurate practical experience. Lectures, management experience simulation, student presentations, and tours of food service operations are educational methods used in this course. LEC

**DN 825 Applied Clinical Nutrition** (1-3)

An intermediate level graduate course in which the appropriate processes involved in the assessment and delivery of nutrition care for patients in ambulatory, acute, and long-term care settings. Students also learn current nutrition theory and practices involved in evaluation, prevention and treatment of common health problems such as obesity, heart disease, diabetes, cancer, renal disease, gastrointestinal disease and hypertension. Elements of pathology and biochemistry of the nutrition related problems are integrated into course topics. Students are typically also enrolled in the clinical nutrition component of DN 827 (applied practicum) associated with the dietetic internship. The DN 827 clinical nutrition experience is part of the supervised experience (internship) in which nutrition practitioners guide the student in the nutrition assessment and care of hospitalized patients and ambulatory clients. However, DN 826 may be taken without DN 827 with permission of the instructor. Prerequisite: Undergraduate course work in Nutrition, diet therapy, 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. Experience take place in hospitals, clinics, community health care 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 Clinical Education 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 832 Studies in Nutrition Care Program and Facility Design** (2)

A planning team approach to the structuring of a nutrition care program or food service system. Emphasis is given to decision alternatives regarding space, work patterns, structural features, construction materials, and relationships with other disciplines. Prerequisite: Consent of instructor. 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 836 Biochemical, Physiological, and Genetic Aspects of Human Nutrition** (1-5)

The topics covered will deal with the interrelationships of biochemistry, physiology, genetics, and nutrition. Emphasis will be placed on developing an understanding of how the coordination of structure and function is related to the metabolic needs of the cell and its response to the environment. This integrated approach will form a basis for evaluating nutritional needs in humans. Students enroll for a total of three credits over two semesters. Prerequisite: Consent of instructor. LEC

**DN 838 Advanced Clinical Dietetics** (2-4)

An in-depth study of the pathophysiology of nutritional disease. Those functional disorders which result in nutritional disease or those nutritional diseases which affect physiological function will be explored. The emphasis will be in the following areas: endocrinology, metabolism, gastroenterology, and hematology. Clinical experience will be integrated into the course to provide opportunity for practice in clinical dietetic specialties. Prerequisite: Consent of instructor. LEC

**DN 839 Clinical Aspects of Nutrition Support** (3)

Specialized nutrition assessment and support. Review of energy expenditure and substrate utilization in specific disease states. Current methods for the initiation and management of enteral and parenteral nutrition therapy including access, metabolic and mechanical complications. Evaluation nutrition support methodology in selected disease states. 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, 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 844 Management of Nutrition Care Personnel** (2)

A study of the application of management theories and functions to personnel management. Includes a study of the role of professional, technical, and supportive personnel in the dietetic field. Emphasis is placed on actual problems through case study and directed readings. Prerequisite: Consent of instructor. LEC

**DN 850 Administration of Nutrition Care Delivery Systems** (2-4)

The course emphasizes the role and responsibilities of a program department administrator. It focuses on long range planning and policy making which takes into consideration the various legal, political, and economic issues which impact on dietetics. Emphasis will be placed on the role of the dietetic administrator in achievement of department goals in the health care delivery scheme. Prerequisite: DN 822, DN 823, or consent of instructor. LEC

**DN 851 Practicum: Administration of Nutrition Care Delivery Systems** (1-2)

Application of planning, policy making, legal, political, and economic issues which impact on dietetics. Emphasis will be placed on the role of the dietetic administrator in achievement of department goals in the health care delivery scheme. Prerequisite: Consent of instructor. LEC

**DN 853 Selected Topics in Resource Management for Nutrition** (1-3)

A study of the role of professional, technical, and supportive personnel in the dietetic field. Emphasis is placed on actual problems through case study and directed readings. Prerequisite: Consent of instructor. LEC

**DN 860 Collaboration Strategies in Health Care** (1)

Persuasion and negotiation techniques: skills to evaluate and promote collaboration

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Employment opportunities are significantly increasing in allied health professions.

Programs in the School of Allied Health integrate formal instruction with practical experience.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

and goal achievement in a multidisciplinary health care team; analysis of communication styles and strategies to achieve mutual beneficial outcomes. 

LEC 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 disease for children, adults, and the elderly. Effective methods of counseling patients and promoting changes on an individual and small group basis will be presented. LEC 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, diabetes, digestive, liver and renal disorders, memory deficits, and ophthalmic dysfunctions. Prerequisite is an 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 investigation of a dietary or herbal supplement and present their findings to classmates on-line or in person. LEC 890 Graduate Research (1-4). Individual investigation of special problems in dietetics and nutrition or hospital dietary administration approved by the student’s adviser or advisory committee. Investigation involves original research. RSH 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. LEC

Hearing and Speech
For a description of master’s and doctoral degree programs, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog.

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

Neurosciences
See the School of Pharmacy chapter of this catalog.

Nurse Anesthesia
Chair: Carol Elliott
2026 Delp Building
Mail Stop 2020, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-6612
Associate Professor: Gordon
Assistant Professors: Elliott, Goodyear-Birch, Weber
Instructors: Pelch, Summers, Watson

Program
The M.S. in Nurse Anesthesia is a 3-month program in two phases. Phase I consists of basic sciences and foundations of anesthesia practice and is 12 months long. Phase II includes principles of advanced anesthesia practice, research skills, and clinical internship and may be completed in 18 months. Students are admitted once a year and begin course work in summer session.

The program prepares nurse anesthesia practitioners to be competent in all clinical and theoretical aspects of anesthesia care and to develop skills essential for participation in scholarly research.

The program includes a full range of courses to establish a solid theoretical base: biophysical and behavioral sciences, physical diagnosis, pharmacokinetics/pharmacodynamics, professional development, and research methodology. Approaches include one-to-one instruction, lecture and laboratories, computer-assisted instruction, seminars, independent study, and interactive compressed video and Web-based instruction.

The program meets the goals of the registered nurse in preparation for the art and science of nurse anesthesia practice. In addition, the program provides advanced-standing entry at the Phase II level for the practicing certified registered nurse anesthetist (CRNA) who wishes to complete the master’s degree.

The entry-to-practice student completes Phases I and II on the Kansas City campus and its outreach affiliates as a full-time student. A satellite program is offered at Mt. Carmel Medical Center in Pittsburg, Kansas. Students complete the first six months in Kansas City and the remaining 24 months on the Pittsburg campus.

The CRNA seeking the master’s degree completes only Phase II, an outreach model that allows for minimal interruption of the CRNA’s professional employment. The Phase II CRNA program includes periodic campus-based lectures and seminars, audiovisual tapes, computer-assisted instruction, structured independent study projects, and Web-based instruction.

Upon graduation, entry-to-practice and advanced-standing students receive the M.S. degree in Nurse Anesthesia and are eligible for certification from the Council on Certification. The program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs/Schools, the North Central Accrediting Association, and the Kansas State Board of Nursing.

Entry-to-practice Program
General Admission Requirements. Applicants must meet Graduate School general entrance requirements. Departmental admission requirements include

1. The applicant must be a graduate of an approved school of nursing.
2. The applicant must have a baccalaureate degree in nursing or an appropriate discipline.
3. The applicant must have a baccalaureate degree in nursing or an appropriate discipline.
4. The applicant must have two years of professional nursing experience with a minimum of one year of recent acute/critical-care experience.
5. In addition to a bachelor’s degree, the applicant must have the following academic prerequisites:

Basic Science
2 semesters of chemistry
1 semester of microbiology
1 semester of anatomy
1 semester of physiology or 2 semesters of anatomy/physiology

These courses must have been taken within 10 years of enrollment with a grade of B (3.0) or better.

The cumulative grade-point average in basic science prerequisites must be 3.0 or higher on a 4.0 scale.

Statistics (1 course)

6. The applicant must have writing skills appropriate to graduate-level work.
7. Three letters of recommendation are required. They should give an accurate appraisal of the applicant’s clinical skills, experience, and ability for graduate study.
8. A personal interview is required.
9. The applicant must have an overall undergraduate grade-point average of 3.0 or higher on a 4.0 scale.
10. The applicant must submit a one-page letter stating professional and educational goals.
11. All admission materials must be received before September 15 for the following summer session.

Degree Requirements. In addition to general and departmental requirements, the applicant must meet the requirements of the Council on Accreditation of Nurse Anesthesia Educational Programs/Schools and the Council on Certification of Nurse Anesthetists for eligibility to write the certification examination. Successful completion of the examination certifies the student as a professional nurse anesthetist (CRNA). Reciprocity privileges are granted throughout the United States.

Specific requirements for the degree include:
1. NURA 801, NURA 805, NURA 811, NURA 812, NURA 813, NURA 814, NURA 815, NURA 821, NURA 822, NURA 823, NURA 824, NURA 825, NURA 831, NURA 833, NURA 834, NURA 839, NURA 850, NURA 851, NURA 852, NURA 880, NURA 890, NURA 891, NURA 896/NURA 899, NRSG 748/NRSG 749, NRSG 754, NRSG 755, PHSI 822.
2. Supervised clinical practicum.
3. Completion of comprehensive examinations.
4. Completion of an acceptable thesis with defense or an acceptable field project with defense.

CRNA Degree Completion Program
The program provides the practicing Certified Registered Nurse Anesthetist with an advanced level of theoretical and practical knowledge of nurse anesthesia. All applicants must meet the admission requirements of the Graduate School and the general admission requirements of the Department of Nurse Anesthesia.

Advanced-standing Admission Requirements
1. The applicant must meet Graduate School admission requirements.
2. The applicant must meet general admission requirements of the Department of Nurse Anesthesia.
3. The applicant must hold licensure as a professional registered nurse (R.N.) in the state in which he or she is currently practicing.
4. The applicant must show evidence of current certification/recertification as a registered nurse anesthetist (CRNA) by the Council on Recertification.
5. The applicant must document current active practice as a CRNA (minimum of eight hours per week).
6. The applicant must have graduated from a program/school of nurse anesthesia accredited by the Council on Accreditation of Nurse Anesthesia Education Programs/Schools.
7. Three letters of recommendation are required from those who can justifiably attest to the applicant’s academic suitability to pursue graduate studies.
8. A personal or telephone interview is required.
9. Statement of Employment Cooperation—A letter from a department chair, hospital administrator, or other responsible person who can verify the applicant’s employment status, appropriate release time, and clinical scheduling that demonstrates support of the applicant’s educational endeavors and responsibility to KU.
10. Statement of Faculty Liaison—A letter from an individual willing to serve as faculty liaison between the student and KU to verify testing security.

Degree Requirements
1. NURA 811, NURA 812, NURA 813, NURA 814, NURA 815, NURA 821, NURA 822, NURA 823, NURA 824, NURA 825, NURA 851, NURA 852, NURA 890, NURA 891, NURA 896/NURA 899, NRSG 754, NRSG 755.
2. Completion of comprehensive examinations.
3. Completion of an acceptable thesis with defense or an acceptable field project with defense.

Nurse Anesthesia Courses
NURA 800 Professional Aspects of Anesthesia (3). This course includes orientation to the profession of nurse anesthesia. The student will gain an understanding of the anesthesia department management and organization. The history of anesthesia will be discussed. Ethical, psychological, professional adjustments and legal responsibilities of the nurse anesthetist will be presented. LEC
NURA 801 Introduction to Clinical Practice (4). Students will engage in clinical practice that involves introduction to basic anesthesia skills. Emphasis is given to patient assessment, anesthetic planning and management of the patient population 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: Basic knowledge of the pathophysiology to the program of nurse anesthesia. Corequisite: NURA 810. LEC
NURA 805 Clinical Anatomy (4). An intensive study of the major anatomical systems and regions of the body which have clinical significance for anesthetists and others. Particular attention devoted to the respiratory, cardiovascular, and nervous systems. Regional topics include the anatomy of the head, neck, vertebral column, thorax, axilla, and femoral triangle. Includes 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
NURA 810 Foundations of Anesthesia Practice (4). The course introduces the student to the basic foundations of nurse anesthesiology. Principles of anesthesia are integrated with the theories and concepts relative to the art and science of practice. The fundamentals of didactic knowledge as applied to the clinical environment are addressed. The course is designed to provide students with the basic understanding of pathological states that require them to engage in critical thinking to provide safe anesthesia care. Prerequisite: Admission to the program of nurse anesthesia. Corequisite: NURA 801. LEC
NURA 811 Advanced Theory in Anesthesia I (2). This is the first of five courses relative to the study of the art and science of nurse anesthesiology. Each course is designed to address specific pathological conditions requiring surgical/anesthetic intervention. Students will acquire the knowledge base pertinent to the pathophysiological state and interpret anesthetic needs. Students will participate in case studies, case scenarios and threaded discussions via the Internet. In addition, analysis of relevant current applicable research will be included. Prerequisite: NURA 801, NURA 810. Corequisite: NURA 821. LEC
NURA 812 Advanced Theory in Anesthesia II (4). This is the second of five courses relative to the study of the art and science of nurse anesthesiology. Each course is designed to address specific pathological conditions requiring surgical/anesthetic intervention. Students will acquire the knowledge base pertinent to the pathophysiological state and interpret anesthetic needs. Students will participate in case studies, case scenarios and threaded discussions via the Internet. In addition, analysis of relevant current applicable research will be included. Prerequisite: NURA 811, NURA 821. Corequisite: NURA 822. LEC
NURA 813 Advanced Theory in Anesthesia III (4). This is the third of five courses relative to the study of the art and science of nurse anesthesiology. Each course is designed to address specific pathological conditions requiring surgical/anesthetic intervention. Students will acquire the knowledge base pertinent to the pathophysiological state and interpret anesthetic needs. Students will participate in case studies, case scenarios and threaded discussions via the Internet. In addition, analysis of relevant current applicable research will be included. Prerequisite: NURA 812, NURA 822. Corequisite: NURA 823. LEC
NURA 814 Advanced Theory in Anesthesia IV (2). This is the fourth of five courses relative to the study of the art and science of nurse anesthesiology. Each course is designed to address specific pathological conditions requiring surgical/anesthetic intervention. Students will acquire the knowledge base pertinent to the pathophysiological state...
Nurse Anesthesia

NURA 825 Immunohematology (1). Lectures on cytology, biosynthesis, and kinetics of blood marrow elements in normal and abnormal states; principles of diagnosis and treatment. Prerequisite: Permission of instructor. LEC

NURA 837 Respiratory Science (1). Designed to acquaint students with theory, equipment, and procedures that relate to respiratory therapy. Emphasis placed on the respiratory system and non-invasive treatments/therapy for the pre-operative patient and the ventilatory support of the critically ill patient in the recovery room and intensive care area. LEC

NURA 838 Advanced Principles of Anesthesia Practice (4). Detailed review of disease states of major systems with emphasis on the cardiovascular, respiratory, endocrine, and neuromuscular systems. Lecture format addressing topics relative to specialized or advanced management techniques for specific physiologic and pathologic states encountered in the surgical patient. Prerequisite: NURA 833. 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 850 Anesthetic Pharmacology (3). Principles of anesthetic agents/common to clinical practice. Content includes pharmacodynamic and pharmacokinetic study of drugs affecting the autonomic nervous system and central nervous system, theories of anesthesia, uptake and distribution, complications, toxicities and therapeutics of anesthetic accessory drugs. Prerequisite: Permission of instructor. LEC

NURA 851 Advanced Pharmacology I (3). General principles, autonomic, cardiovascular, respiratory, gastrointestinal, and hematologic topics, advanced pharmacology with emphasis on anesthetic implications. Web-based course with each section containing the following components: content-guided-practice (questions with feedback), clinical cases, and practice exams. On-line threaded discussions will be provided, allowing interaction between students, and between students and the instructor. Prerequisite: NURA 850 or permission of instructor. LEC

NURA 852 Advanced Pharmacology II (3). Central nervous system, endocrine, chemotheraphy, hema-immunopoietic, and anti-inflammatory drugs, advanced pharmacology with emphasis on anesthetic implications. Web-based course with each section containing the following components: content-guided-practice (questions with feedback), clinical cases, and practice exams. On-line threaded discussions will be provided, allowing interaction between students, and between students and the instructor. Prerequisite: NURA 851 or permission of instructor. LEC

NURA 861 Principles of Contemporary Practice (3). Prerequisite course for degree completion candidates seeking advanced standing. This is a systematic review of clinical and didactic anesthesia principles that assess scope of professional practice. LEC

NURA 880 Advanced Topics: ___ (1-3). 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 or master's field project for the Master of Science in Nurse Anesthesia. 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 Research (2). Students are introduced to thesis development. The student will become increasingly competent in the reading and critical analysis of anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Outside readings, student presentations and class discussion are utilized in achieving course objectives. LEC

NURA 892 Research Seminar II (1). This is the second of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 893 Research Seminar III (1). This is the third of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC
NURA 894 Research Seminar IV (1). This is the fourth of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 895 Research Seminar V (1). This is the fifth of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 896 Field Project (1-3). Restricted to the writing of a research project, usually based on applied research associated with field experience in nurse anesthesia. In partial fulfillment of requirement for the Master of Science in Nurse Anesthesia. Graduate training in practice methods, issues or techniques of anesthesia summarized as a major field research project in lieu of thesis. Projects must be defended prior to degree completion. Prerequisite: Consent of adviser. LEC

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 Anesthesia. Thesis must be defended prior to degree completion. Prerequisite: Consent of adviser and NURA 890. LEC

Occupational Therapy

Chair: Winifred W. Dunn, wdunn@kumc.edu
Graduate Adviser: Joan McDowd, jmedowd@kumc.edu
3033 Robinson Hall
Mail Stop 2003, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-7195, www.kumc.edu/SAH/OTE
Professors: Dunn, McDowd
Associate Professors: Brown, Radel
Assistant Professors: Grobe, Rempfer

Master of Occupational Therapy

The Master of Occupational Therapy is an entry-level professional degree for occupational therapists. Occupational therapists use occupation (i.e., purposeful activity that is meaningful to the person and is 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, researchers; teach at a college or university; or any combination of these.

The 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 may sit for the national certification examination for occupational therapists administered by the National Board for Certifica-
Fieldwork Level II. 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 3b semesters. An optional FW II experience may be scheduled during the Fall 3a semester. At least one FW II experience is to be completed 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. Both undergraduate and graduate courses for the entry-level M.O.T. degree are outlined below.

Typical Course Sequence

<table>
<thead>
<tr>
<th>Summer 1 (9 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 388 Human Anatomy</td>
<td>6</td>
</tr>
<tr>
<td>OCTH 395 Orientation to the Occupational Therapy Profession</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 1 (15 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 401 Theory and Practice in Occupational Therapy</td>
<td>2</td>
</tr>
<tr>
<td>OCTH 415 Communication and Professional Relations</td>
<td>1</td>
</tr>
<tr>
<td>OCTH 422 Analysis and Adaptation of Occupations I</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer 2 (6 credit hours–July through September)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 435 Life Span Development from an Occupational Perspective</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 2 (14 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 704 Planning and Intervention in Occupational Therapy</td>
<td>2</td>
</tr>
<tr>
<td>OCTH 710 Service Management: Delivery Systems</td>
<td>1</td>
</tr>
<tr>
<td>OCTH 720 Occupational Therapy Practice Models</td>
<td>7</td>
</tr>
<tr>
<td>OCTH 730 Practicum III</td>
<td>2</td>
</tr>
<tr>
<td>OCTH 783 Evidence-based Practice</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring 2a (6 credit hours–January through March)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 770 Level II Fieldwork, Part 1</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring 2b (6 credit hours–April and May)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OCTH 775 Level II Fieldwork, Part 2</td>
<td>6</td>
</tr>
</tbody>
</table>

General Admission Requirements. Applicants must meet Graduate School general entrance requirements. Departmental admission requirements include:

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.

M.S. Degree Requirements. The student must complete a minimum of 12 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 9 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.

Ph.D. in Therapeutic Science

For information on this doctoral program, contact Joan McDowd, Occupational Therapy Education, 3033 Robinson Hall, Mail Stop 2003, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-7195, jmcdowd@kumc.edu.

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 training in 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 obtain 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 applicants' interests and goals correspond to those of available faculty also are considered. All applicants must submit a personal statement of career goals and professional development, three letters of recommendation, and two copies of all graduate
and undergraduate transcripts. Application materials must be received by February 1 for fall admission.

Curriculum. The program includes a core curriculum for all students and also 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.

- **Occupational Therapy Courses**

**OCTH 680 Special Topics in Occupational Therapy:** (1-6).

**OCTH 699 Special Projects:** (1-6).

**OCTH 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 presenting at conferences. Students will have the opportunity to focus their leadership skills and professionalism on issues of concern to administrators, staff therapists, educators, or those in private practice. Prerequisite: Permission of instructor. LEC

**OCTH 704 Planning and Intervention in Occupational Therapy:** (2). Using a problem based clinical reasoning approach this course examines the impact of common medical conditions on occupational performance with individuals of all ages. Students will practice developing plans and interventions for occupational performance problems presented by varying medical conditions. LEC

**OCTH 705 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 TS 800.) LEC

**OCTH 710 Service Management:** (1). This course is designed to provide the student with an understanding of how the systems in which service occurs impact practice. Financial, regulatory, and personnel issues across a variety of systems will be addressed. LEC

**OCTH 715 Supervision, Team Relations, and Management Communication:** (1). This course emphasizes entry level skills related to supervision, teamwork, and communication within practice environments. LEC

**OCTH 720 Occupational Therapy Practice Models:** (7). In a series of modules this course introduces the student to selected occupational therapy practice models. Theoretical background, assessments, and interventions approaches common to each model are described. The laboratory component of this course consists of two practice experiences: 1) practice in selecting and applying appropriate practice models for different occupational performance problems. LEC

**OCTH 725 The Research Process:** (2). An introduction to the research process including research design, methods, sampling, measurement, and research ethics. Qualitative and quantitative research are discussed. Research consumer skills are emphasized. LEC

**OCTH 727 Professional and Technical Writing:** (1). Students will achieve competency in scientific writing and use of the American Psychological Association (APA) style. LEC

**OCTH 730 Practicum II:** (2). Selected field experiences provide opportunities for critical thinking and problem solving in a variety of contexts and service provision models where occupational therapy is provided to persons with disabilities. Students will have opportunities to provide assessment and intervention to at least one individual with a psychosocial dysfunction and one individual with a physical disability under the supervision of an occupational therapy mentor. Students will determine the relevant variables for intervention, work collaboratively with others within the setting and analyze and reflect upon their experiences. LEC

**OCTH 735 Practice Models for Applied Science:** (3). Clinicians and students are most familiar with specific practice models and frameworks in their own specialty areas. A goal of this graduate course is to explore current models and practice for interdisciplinary different areas of disability (including mental and physical health over the life span). LEC

**OCTH 738 Special Topics in Practice:** (1-2). Focused study of theory application, professional topics and skills, and emerging practice questions. Learning experiences may be in the form of individual guided readings and discussion, directed projects, seminars, or community/clinical experience with focus on advanced supplemental or exploratory learning. Specific topics and formats will vary as they are generated by student interest and faculty expertise. LEC

**OCTH 745 Seminar I:** (3). This course will address areas of special interest in occupational therapy. Issues and trends related to advanced application of theory, assessment, and intervention will be presented in lecture and discussion. Special projects will emphasize the students’ special interests. Although faculty directed, student presentations will be emphasized. LEC

**OCTH 750 Case-Based Clinical Reasoning:** (2). Students will apply the clinical reasoning process to individuals with occupational performance needs. Cases will be presented from the student’s Level II fieldwork experience. In a problem solving format, student will evaluate services received by the individual and discuss alternatives given a variety of situations. LEC

**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 in service management course, 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 community projects, students will examine various systems that impact service delivery with individuals. Students will complete a semester long project with an individual centered on facilitating occupational performance needs. 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 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 Clinical Reasoning:** (2). Students will apply the clinical reasoning process to populations with occupational performance needs. Students will prepare a program plan for a population by identifying needs of the population, potential funding sources, personnel, settings, and best practice program elements. Advanced clinical reasoning of cases will also be included. LEC

**OCTH 780 Elective Level II Fieldwork, Special Topics:** (6). An elective (optional) full-time, three-month 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. Prerequisite: Satisfactory completion of required academic course work. 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:** (2). 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. Prerequisite: OCTH 727. LEC

**OCTH 799 Special Projects:** (1-6). An elective course to allow students to pursue areas of special interest under the direction of the faculty member of his or her choice. May be repeated for credit. IND

**OCTH 800 Research Seminar:** (1). A seminar 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 TS 800. LEC

**OCTH 801 Applied Neuroscience:** (3). This 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 individual’s problems. Prerequisite: Undergraduate neuroscience course or permission of instructor. LEC

OCTH 810 Kinesiology (3). This course is designed to move beyond the clinical application of biomechanical principles in evaluation and treatment to the analysis of particular movement problems and to creative problem solving. Following current content of advanced kinesiology and exercise physiology, students will select a particular kinesiological issue or problem for more in depth guided study. Prerequisite: Permission of instructor. LEC

OCTH 835 Interpreting 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 also design their own research project reflecting their area of interest. LEC

OCTH 845 Advanced Study in: (3). This course will focus on directed readings, discussion, and the interpretation of data based literature in an identified specialty area. Although faculty directed, student presentations will be emphasized. Student directed research topics will be explored. Prerequisite: OCTH 745 or equivalent course work with permission of instructor. LEC

OCTH 880 Special Topics in Occupational Therapy (1-6). Investigation of special issues or problems relevant to an aspect of occupational therapy research and/or practice. Systematic coverage of the current issues will include study of pertinent sociocultural trends and practice factors. Students will prepare an oral presentation or written paper to summarize work accomplished. Prerequisite: Permission of instructor. LEC

OCTH 890 Graduate Research (1-6). This course focuses on individual investigation of special problems in occupational therapy. The student will manage an individual original research project which has been approved by the student’s advisory committee. Data from original research will be collected and summarized during this course. LEC

OCTH 899 Thesis (1-6). This course requires scholarly writing, based on individual original research and is carried out under the guidance of the student’s advisor. The scholarly writing and a professional oral presentation of research must meet with approval of the student’s advisory committee to complete thesis requirements. Prerequisite: OCTH 890. LEC

Therapeutic Science Courses

TS 800 Research Proseminar (1). A proseminar conducted by the core graduate faculty in Occupational Therapy and Rehabilitation Science. Twice-monthly meetings will involve student and faculty presentations of 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 OCTH 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 OCTH 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 850 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 900 Dissertation in Therapeutic Science (1-9). Research experience leading to dissertation for doctoral students in Therapeutic Science. LEC

Physical Therapy and Rehabilitation Science

Interim Chair: Lisa Stehno-Bittel, lbittel@kumc.edu
3056 Robinson Hall
Mail Stop 2002, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-6799

Associate Professors: Loudon, Pohl, Stehno-Bittel
Assistant Professors: Gobert, Liu

The department offers three programs: (1) a professional Master of Science 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; and (3) a rapid-transition M.S./Ph.D. joint degree for students with B.S. degrees in health-related sciences who wish to become physical therapists and Ph.D.-educated rehabilitation scientists.

Doctor of Physical Therapy

A three-year Doctor of Physical Therapy degree is replacing the current two-year M.S. degree. Please check with the department about the status of this program.

M.S. in Physical Therapy

The Master of Science in Physical Therapy programs provide opportunities for students to learn the application of basic science principles to the practice of physical therapy. 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 master’s degree program in physical therapy, an applicant must meet the general entrance requirements of the Graduate School. 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 normal 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

**Miscellaneous**
1 course in first aid and current CPR certification
Degree Requirements. In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree include:

1. Successful completion of a minimum of 51 credit hours of studies, comprising 21 hours of core courses, 12 hours of foreign language or other research skills (FLORS), 12 hours of doctoral dissertation research, and 6 hours of cognate-elective courses.

2. Demonstration of competence in the core areas of study and FLORS, by successfully completing one or more parts of a comprehensive examination that qualifies the student for candidacy for the Ph.D.

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.

M.S./Ph.D. Joint Degree Program

The joint degree program integrates the professional M.S. 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 joint degree during the admission process. To receive both degrees, students must meet the requirements for each degree. Credit hours earned in the professional M.S. degree program cannot be transferred toward requirements for the Ph.D. degree, although satisfactory performance in some Ph.D. courses may be recognized and credited in formulating the student’s professional M.S. curriculum. It is expected that the equivalent of four to five years of full-time study will be needed to fulfill the requirements for both degrees.

● Physical Therapy Courses

PHTH 701 Physical Therapy Procedures I (2). Skills required by the physical therapist in the generalist acute care environment. A series of patient care-related lectures, demonstrations, videotapes and laboratories are integrated to teach infection control, wound and skin care procedures, body mechanics, basic assessment, transfers, positioning, tubes, ostomies, introduction to problem-oriented medical record and documentation, clinical safety procedures, tilt table usage and stress management. Prerequisite: Admission into entry-level Master's of Science in Physical Therapy program or permission of instructor. LEC

PHTH 702 Physical Therapy Procedures II (3). Safe application and problem solving using hydrotherapy, physical agents, goniometry, range of motion and therapeutic exercise, manual muscle testing, compression devices, massage, gait training, and wheelchair management. Prerequisite: PHTH 701 and admission into the entry-level Master’s of Science degree program in Physical Therapy or permission of instructor. LEC

PHTH 705 Fundamentals of Pathophysiology (3-4). Review of integrative human physiology and pathophysiology 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 Physical Therapy program or permission of the instructor(s). LEC

PHTH 706 Professional Interactions (1). Interactions between health professionals and patients, professionalism, appreciation for cultural and individual differences within health care, and medical terminology are addressed. Professional responsibilities in physical therapy are introduced, including codes of ethical conduct and awareness of appro-
Physical Therapy & Rehabilitation Science

Some form of health insurance is required for students on the KU Medical Center campus.

A joint M.S./Ph.D. degree in physical therapy and rehabilitation science is available.

For online information about graduate programs in the School of Allied Health, see www.kumc.edu/allied/programs.html or alliedhealth.kumc.edu/programs.html.

private professional behaviors directed by organizational and legislative regulations. The development of medical terminology recall and recognition skills is also covered in this course. Prerequisite: Admission to the entry-level Master’s in Science Physical Therapy Program or permission of instructor. LEC

PHTH 707 Patient Care and Education (3). The development of effective documentation skills, including exposure to a variety of documentation formats and implications. Admission to the entry-level Master’s in Science Physical Therapy Program and permission of instructor. LEC

PHTH 805 Seminar in Rehabilitation Research (0-5-2). Students will be instructed in the planning and presentation of a 45 minute scientific seminar on topics outside their thesis area and on their thesis work. Students will learn how to design and produce effective poster presentations. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PHTH 824 Development and Pediatrics (3). Fundamental concepts necessary for the entry-level physical therapist in the assessment and treatment of pediatric clients is addressed. Components of normal and abnormal development, particularly during the first year of life are discussed. Emphasis will be given to the development of motor and adaptive behavior as a basis for habilitation of the individual and assessment and treatment of pediatric clients. A major component will address the child with cerebral palsy and related neuromotor disorders. Emphasis will be directed toward a problem-solving approach to children with various diseases and conditions. Prerequisite: Admission into entry-level Master’s in Physical Therapy program or permission of instructor. LEC

PHTH 826 Neuromuscular Therapeutics I (3). This course will build on Neuroscience (PHTH 842) and portions of Pathophysiology (PHTH 705) by presenting the comprehensive physical therapy assessment and initial treatment planning for persons with neuromuscular disorders. In addition, students will learn to use electrodiagnostic and electrophysiologic modalities to assist in comprehensive patient assessment and treatment. Prerequisite: Admission into entry level Master’s in Physical Therapy program or permission of instructor. LEC

PHTH 830 Clinical Education III (2). This course is comprised of a four week clinical practicum at an assigned facility providing the student with the opportunity to develop clinical competence in the more advanced physical therapy and educational theories with emphasis on exposure to the patient with orthopedic, neurologic, and cardiopulmonary dysfunction. Prerequisite: Admission into the Entry Level Master’s Degree Program in Physical Therapy Education and successful completion of four semesters of the curriculum, including PHTH 730 and PHTH 740. LEC

PHTH 836 Contemporary Health Care Issues and Management (2). Designed to familiarize the entry-level therapist with 1) contemporary issues in health care which impact upon the delivery of physical therapy, 2) business development and entrepreneurial skills, and 3) organizational and human resource management skills. Changes in the U.S. health care system will be discussed, including managed care concepts, essential elements and principles of management in health care organizations, including mergers of human resource, fiscal, and operational management. Prerequisite: Admission into the entry-level Master’s in Science Physical Therapy program or permission of instructor and PHTH 708, Physical Therapy Practice Issues. LEC

PHTH 841 Neuromuscular Therapeutics II (4). This course will build on PHTH 826 (Neuromuscular Therapeutics I) and concentrate on constructing, implementing and revising comprehensive treatment plans for patients with neuromuscular disorders (including the rationale for specific treatment strategies, discharge planning, periodic re-evaluation, and modification of the treatment plan based on the progress of the patient). Prerequisite: Admission into entry level Master’s in Physical Therapy program or permission of instructor. LEC

PHTH 842 Neuroscience for Physical Therapists (6). This course consists of the Neuroscience ANAT 842/PHSL 842 course with additional lectures and projects over material relevant to neurological regeneration and adaptation. It integrates human neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, and basic neurology. Instruction formats include lectures, conferences, laboratories, and demonstrations. Prerequisite: Acceptance into the Physical Therapy program and permission of the course director. LEC

PHTH 846 Advanced Cardiopulmonary Therapeutics (3). 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: Admission into Physical Therapy professional program or permission of instructor. LEC

For online information about graduate programs in the School of Allied Health, see www.kumc.edu/allied/programs.html or alliedhealth.kumc.edu/programs.html.
PHTH 850 Clinical Medicine (3). This course is designed to educate students in areas of physical therapy practice not covered in advanced neuromuscular, cardiovascular, and orthopaedic courses. Areas of study include thermal, metabolic, malignant, traumatic, and viral pathologies. Emphasis will be placed on the pathology of the disorder, medical and nursing interventions, psychosocial issues, and the role of the physical therapist in both individual and team approaches to patient evaluation and treatment. Methods of instruction include lectures, demonstrations, and observational experiences. Prerequisite: Admission into entry level Master’s in Physical Therapy program or permission of instructor. LEC

PHTH 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: Admission into entry-level Master of Science in Physical Therapy program or permission of instructor. LEC

PHTH 861 Advanced Evaluation Methods & Principles of Treatment of Musculoskeletal Disorders (4). This course incorporates concepts from PHTH 711: Applied Kinesiology and Biomechanics and PHTH 760: Evaluation Methods and Principles of Treatment of Musculoskeletal Disorders. Evaluation, development of a treatment plan, and treatment techniques for the spine, peripheral joints, and the temporomandibular joint are taught through lecture, demonstration and student participation. Prerequisite: Admission into entry level Master’s in Physical Therapy program or permission of instructor, and PHTH 711 and PHTH 760. LEC

PHTH 862 Pathobiology of Human Function I (4). The study of the biology of pathological processes that impair human function with emphasis on 1) the mechanisms by which cells repair and adapt following injury; 2) skeletal and cardiac muscle pathobiology, including skeletal muscle adaptation in health and disease and congenital muscle abnormalities; 3) pathophysiology of skin, tendons, ligaments, cartilage, and other connective tissues; 4) bone pathology, including osteoporosis, osteoarthritis, and fractures; 5) pathophysiology of cardiorespiratory function. Emphasis will be placed on the functional impairments resulting from the pathological condition. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PHTH 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 in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PHTH 865 Independent Study in Physical Therapy (1-3). Individually negotiated learning experiences appropriate to the interests and background of the student. The student will be supervised by a PT faculty member. Prerequisite: Admission to the Post-Professional Program or permission of instructor. LEC

PHTH 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 Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PHTH 871 Research Practicum (0.5-3). Supervised and directed experiences in conducting research. Methodology, data gathering, data reduction, and interpretation will be stressed. The student will be supervised by a member of the faculty engaged in research. Prerequisite: Admission to the entry-level Master’s in Physical Therapy program, post-professional program or consent of instructor. LEC

PHTH 872 Clinical Education IV (5). Eighteen weeks of clinical practice in either of 2 different practice settings for nine weeks each of 3 different practice settings for six weeks each. During these clinical rotations 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: PHTH 830, admission into entry-level Master of Science in Physical Therapy program, or permission of instructor. LEC

PHTH 873 Research Practicum (1-3). This course is designed to provide supervised research experience in various laboratories in the department. Prerequisite: Entry in the Ph.D. program in Rehabilitation Sciences or consent of instructor. LEC

PHTH 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 post-professional program or consent of instructor. LEC

PHTH 880 Human Anatomy (5). Lectures and demonstrations of models and dissected material cover the most important features of gross anatomy including detailed study of bones, muscles, blood vessels, and peripheral nerves. Emphasis is on the functional anatomy of the extremities, back, respiratory system, cardiovascular system, head, and neck. Assigned dissection and prossection of the human cadaver is accomplished by each student. LEC

PHTH 899 Master’s Thesis (1-3). Preparation of the formal thesis based on independent research and in partial fulfillment of the requirements for the Master’s degree. RSH

PHTH 960 Advanced Studies in Musculoskeletal Rehabilitation (3). The student will study the biomechanical principles related to normal human joint motion. The factors that predispose abnormal motion will be evaluated. Current scientific literature will be investigated to determine the optimal rehabilitation techniques for functional musculoskeletal rehabilitation. Prerequisite: Entry in the Ph.D. program in Rehabilitation Sciences or consent of instructor. LEC

PHTH 961 Advanced Studies in Neurorehabilitation (3). Rehabilitation of adults with brain damage rests on the premise that new skills can be learned despite central nervous system pathology. This course will explore the science of neurorehabilitation. We will investigate the literature concerning the following questions: can rehabilitation affect change that leads to skill learning, who will benefit from rehabilitation, how should outcomes be evaluated, what optimizes rehabilitation success, when should rehabilitation be undertaken, and how much rehabilitation is necessary to facilitate skill learning? Prerequisite: Entry in the Ph.D. program in Rehabilitation Sciences or consent of instructor. LEC

PHTH 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 Ph.D. program in Rehabilitation Sciences or consent of instructor. LEC

PHTH 980 Graduate Research (1-10). Original laboratory investigation conducted under the supervision of a senior staff member. Prerequisite: Consent of instructor. LEC

PHTH 990 Dissertation in Rehabilitation Research (1-10). For students in advanced standing enrolled in the doctoral program in Rehabilitation Science. LEC

Special Education
See the School of Education chapter of this catalog.
School of Architecture and Urban Design

John C. Gaunt, Dean
Marvin Hall, 1465 Jayhawk Blvd., Room 206
Lawrence, KS 66045-7614, (785) 864-4281

Architecture .............................................. 73
   The Program ............................................................ 73
   Professional ................................................................... 73
   Academic ....................................................................... 73
   Architectural Management Post-professional ........... 73
Facilities ................................................................... 73
   Marvin Hall ................................................................... 73
   Architectural Resource Center ...................................73
Admission ................................................................. 74
1. Professional Master of Architecture ................. 74
   Year One: Upper-level Undergraduate and Entry-level Graduate Curriculum .......... 74
   Year Two: Professional Graduate Curriculum .......... 74
   Year Three: Advanced Professional Graduate Curriculum ................................................... 75
2. Academic Master of Architecture ...................... 75
3. Post-professional Master of Architecture .......... 75
Architecture Courses ................................................... 75
Architectural Engineering ............................... 78
Joint Professional M.Arch./ B.S. in Architectural Engineering Option ................. 78
Urban Planning ......................................................... 79
   Admission ................................................................. 79
   Baccalaureate Preparation ........................................ 79
   M.U.P. Degree Program & Requirements .......... 79
   Concentrations .............................................................. 79
   Free Electives ............................................................. 80
   Thesis Option ............................................................ 80
   Nonthesis Option .......................................................... 80
   Urban Planning Courses ............................................. 80
Joint Degree Programs ........................................... 81
   M.U.P. & M.Arch. .................................................... 81
   M.U.P. & M.A. in American Studies ...................... 81
   M.U.P. & M.PA. .......................................................... 82
   M.U.P. & J.D. ............................................................ 82
School of Architecture and Urban Design

John C. Gaunt, Dean
Michael Swann, Associate Dean
J. William Carswell, Associate Dean
Marvin Hall, 1465 Jayhawk Blvd., Room 206
Lawrence, KS 66045-7614
Phone: (785) 864-4281, Fax: (785) 864-5393
archku@ku.edu or www.saud.ku.edu

Architecture
Chair: J. William Carswell
Marvin Hall, 1465 Jayhawk Blvd., Room 205
Lawrence, KS 66045-7614, (785) 864-4365
www.saud.ku.edu

Professors: Diaz, Grabow, Lesnikowski, Major, Mayo, Newton, Rockhill, Spreckelmeyer
Professors Emeriti: Kahn, McCoy
Associate Professors: Barrière, Carswell, Criss, Griffin, Jackson, Luckey, Padjet, Richardson, Sander, Swann
Assistant Professors: Gore, Huppert, Sanguinetti

The Program
Graduate study in architecture at KU leads to the Master of Architecture (M.Arch.) degree. There are three distinct plans of study, depending on the student’s educational background:

1. A professional degree for a student with an undergraduate degree in any field, including architecture.
2. An academic degree for a student with an undergraduate degree in architecture or a related discipline.
3. A post-professional degree for a student with an undergraduate degree in architecture or a related discipline and some construction industry experience.

The first course of study leads to a professional degree that prepares the student to enter an architectural apprenticeship in the office of a licensed architect. A student with any undergraduate degree including architecture may enter this program. This degree is accredited by the National Architectural Accrediting Board. To receive the accredited degree, each student must complete seven semesters, over three years, in an approved sequence of architectural design studios, each of which is accompanied by associated professional courses.

According to the National Architectural Accrediting Board, “In the United States, most state registration boards require a degree from an accredited professional 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 two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

“Master’s degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.”

The second course of study is an 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 the course of study. To receive the master’s degree, each student must complete an academic or design-related project or must take a comprehensive exam at the end of the plan of study.

The third course of study is the architectural management post-professional program, on the KU Edwards Campus in Kansas City. This course of study gives the practitioner an understanding of management issues in the design process. It is structured to be completed on a part-time basis.

Facilities
The School of Architecture and Urban Design is in Marvin Hall on the central KU campus in Lawrence. First built in 1907, Marvin Hall was completely renovated and remodeled in 1979-80 and has received design awards from the Kansas City Chapter of the American Institute of Architects and the Kansas Preservation Alliance. Marvin Hall houses a Building Technology Laboratory, an Illumination Laboratory, Computer Laboratories, a Solar Research Laboratory, a Construction Management Research Laboratory, a Wood and Metal Shop, and a Photographic Laboratory. The Architectural Resource Center in Marvin Hall consists of a reading room and a slide library. The reading room contains architectural references, subscriptions to domestic and foreign journals, two periodical indices, and approximately 1,000 back issues of various periodicals. The slide library contains more than 85,000 architectural slides. The privately financed reading room provides a quiet study space and ready reference material for architectural design students. The Architectural Resource Center complements KU’s Art and Architecture Library in Spencer Art Museum.

Photos page 72: Architectural renderings by Jennifer Jecker and Leah Markey of proposed designs for the exterior and lobby of an opera house for Lawrence.
Admission

Students who wish to practice as licensed architects should apply to the professional, NAAB-accredited Master of Architecture program.

Students who do not have an accredited first professional degree in architecture and do not intend to become licensed architects but are interested in the study of architecture at the graduate level (either for academic or related professional reasons) may apply for admission to either the academic or post-professional program. Depending on the student’s previous background, he or she may, at the discretion of the faculty, be required to take basic skill courses in addition to the regular plan of study.

Regardless of background or career goals, a person whose previous records indicate the ability to succeed with advanced work may be admitted to the Graduate School through 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 Graduate School reviews the student’s academic background before admitting a student without a bachelor’s degree as a degree-seeking graduate student at KU. A complete application for admission consists of the following materials:

1. Graduate School application form.
2. Two copies of official transcripts 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:
   - Domestic students applying online ........................................... $45
   - Domestic students applying on paper ........................................ $55
   - International students applying online .................................... $55
   - International students applying on paper ................................ $80
5. Evidence of language proficiency if the native tongue is not English, including
   - A degree from an English-language college or university or
   - 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.
6. A statement of interest indicating the applicant’s career goals and the relationship of these goals to the specific option chosen.
7. A brochure of design work if the applicant’s previous degree was in a design discipline or samples of written work if the previous degree was outside the design discipline.

In most cases, candidates are interviewed by telephone or in person as part of the application process. Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

1. Professional Master of Architecture

A student who wishes to pursue a professional career as a licensed architect may apply for admission to this program. Degree requirements conform to the standards established by the National Architectural Accrediting Board, and students who have successfully completed course work in an approved NAAB curriculum may achieve advanced standing. All requests for advanced standing are evaluated using the minimum qualifications for graduate study at KU, curricular standards established by the NAAB, and procedures approved by the architecture program graduate studies committee. This degree requires a sequence of seven semesters of architectural design studio, each of which is accompanied by associated professional graduate courses. One semester of architectural design must be taken in an approved studio setting in a foreign country. Currently, students in this program spend a summer session in Siena, Italy, and Berlin, Germany.

The curriculum is divided into three distinct years. Minimum standards for admission and the approved course work for each level are as follows:

Year One: Upper-level Undergraduate and Entry-level Graduate Curriculum. Open to (1) graduates with bachelor’s degrees who have completed college course work in physics and calculus and meet the minimum standards set by the Graduate School for admission as graduate students, or (2) juniors or seniors pursuing the Bachelor of Arts in Architectural Studies degree at KU who meet the minimum requirements outlined in (1) of this paragraph, excluding the award of the bachelor’s degree and who have been pre-admitted to this degree program.

Fall Semester: Design Vocabularies (18 hours)
ARCH 603 Graduate Design Studio I .......................... 6
ARCH 613 Visual Thinking Studio I ............................ 3
ARCH 626 Building Technology I ............................ 3
ARCH 640 History of Architecture I: Ancient and Medieval ........................................... 3
Architectural elective ................................................. 3

Spring Semester: Technology (16 hours)
ARCH 604 Graduate Design Studio II .......................... 6
ARCH 627 Building Technology II ............................. 3
ARCH 641 History of Architecture II: Renaissance Age of Reason ........................................... 3
ARCE 630 Statics for Architects .................................. 2
ARCE 631 Strength of Materials for Architects .............. 2

Year Two: Professional Graduate Curriculum. Open to (1) students who have completed all requirements in Year One and meet the standards set by the Graduate School and the architecture program for continuation as graduate students, or (2) graduates with bachelor’s degrees in approved NAAB curricula who meet the minimum standards outlined in (1) of this paragraph.

Fall Semester: Site Design (18 hours)
ARCH 703 Graduate Design Studio III .......................... 6
ARCH 740 Architecture History/Theory IV .................. 3
ARCH 704 Site Planning ............................................. 3
ARCE 633 Structural Systems for Architects ................. 3
ARCE 670 Building Power Systems for Architects ........ 1
ARCH 672 Building Interior Lighting for Architects ........ 1
ARCH 676 Building Acoustical Systems for Architects .... 1

Spring Semester: Human Use (18 hours)
ARCH 704 Graduate Design Studio IV .......................... 6
ARCH 665 History of Urban Design .......................... 3
ARCE 634 Analysis and Design of Structures for Architects ........................................... 3
ARCE 561 Building Mechanical Systems for Architects .... 3
Architectural elective ................................................. 3
Year Three: Advanced Professional Graduate Curriculum. Open to (1) students who have completed all requirements in Year Two and who meet the standards set by the Graduate School for continuation as graduate students, or (2) graduates with NAAB 3-year bachelor of architecture degrees who meet the standards outlined in (1) of this paragraph.

Summer Session: Urban Space, Siena, Italy (9 hours)
ARCH 571 Contemporary Issues Seminar II (1).
ARCH 570 Contemporary Issues Seminar I (1).
ARCH 552 Professional Practice (3).
ARCH 510 Problems in Computer Applications (3).
ARCH 501 Architectural Design VIII (6).

Fall Semester: Practice (15 hours)
ARCH 803 Graduate Design Studio VI ...................... 6
ARCH 808 Architectural Management Systems .......... 3
Architectural electives ............................................. 6

Spring Semester: Design Integration (15 hours)
ARCH 804 Graduate Design Studio VII ..................... 6
ARCH 802 Professional Practice .................. 3
Architectural electives ............................................. 6

Note: Architectural electives in the above curriculum are chosen from the four concentrations described in the Academic Graduate program. Students must elect a minimum of one course in each of the four areas.

2. Academic Master of Architecture
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 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 listed above. A minimum of 6 of these hours must be taken in one of the established concentrations. With the consent of the student's adviser 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 and Urban Design. 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.

The following list describes the four concentrations and provides a sample of courses offered in the recent past in each area. Students should consult the most current course listing provided by the Architecture Program each academic year to determine which courses will be offered each semester.

3. Post-professional Master of Architecture
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. Studies in this program are intended to

1. Provide skills and knowledge necessary to become effective participants in the management of an 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 courses in Financial and Economic Issues, Organizational Issues, Computer and Research Methods, Project Delivery, Law and the Design Profession, Marketing, and Contemporary Issues Seminars. Students may enroll in up to 6 hours of graduate credit outside the architectural management curriculum. Six 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.

- Architecture Courses
ARCH 500 Architectural Design VII (6).
ARCH 501 Architectural Design VIII (6).
ARCH 510 Problems in Computer Applications (3).
ARCH 552 Professional Practice (3).
ARCH 570 Contemporary Issues Seminar I (1).
ARCH 571 Contemporary Issues Seminar II (1).

Technology/Practice
Building Practicum
Building Mechanical and Energy Systems (see Architectural Engineering course list)
Construction and Project Management (see Architectural Engineering course list)
Electrical and Illumination Systems (see Architectural Engineering course list)
Structural Systems (see Architectural Engineering course list)
Architectural Management
Design/Methods
Computer Applications
Visual Thinking
Architectural Photography
Advanced Architectural Presentation
Urban/Social
Buildings as Cultural Artifacts
Homespaces/Workplaces
History of Urban Design
Environmental and Land Use Planning (see Urban Planning course list)
Housing and Development Planning (see Urban Planning course list)
Physical Development Planning (see Urban Planning course list)
Transportation Planning (see Urban Planning course list)
ARCH 572 Contemporary Issues Seminar III (1).
ARCH 573 Architecture Management: Financial and Economic Issues (3).
ARCH 574 Architecture Management: Organizational Issues (3).
ARCH 575 Architecture Management: Managing a CAD System (3).
ARCH 576 Architecture Management: Project Delivery (3).
ARCH 577 Marketing of Professional Services (3).
ARCH 578 Design Professions and the Law (3).
ARCH 600 Special Topics in Architecture: _____ (1-3).
ARCH 602 Accelerated Architectural Design (6).
ARCH 603 Graduate Design Studio I (6).
ARCH 604 Graduate Design Studio II (6).
ARCH 610 Computers and Project Development (3).
ARCH 613 Visual Thinking Studio I (3).
ARCH 615 Intensive Graphics II (3).
ARCH 616 Advanced Architectural Presentation Techniques (3).
ARCH 617 Principles of Architectural Composition (3).
ARCH 618 Architectural Photography (3).
ARCH 619 Advanced Architectural Photography (3).
ARCH 623 Building Practicum (3).
ARCH 626 Building Technology I (3).
ARCH 627 Building Technology II (3).
ARCH 630 Recording and Representing Historic Structures (3-6).
ARCH 632 Contemporary French Architecture (3).
ARCH 633 Readings in Classical 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 640 History of Architecture I: Ancient and Medieval (3).
ARCH 641 History of Architecture II: Renaissance to Age of Reason (3).
ARCH 642 History of Architecture III, Modern (3).
ARCH 643 Vernacular Architecture in the U.S. to 1860 (3).
ARCH 644 Vernacular Architecture in the United States from 1860 (3).
ARCH 645 History of Architecture in the United States to 1860 (3).
ARCH 646 History of Architecture in the United States from 1860 (3).
ARCH 647 Pre-Columbian and Colonial Architecture of Mexico and South America (3).
ARCH 648 Historic Preservation (3).
ARCH 649 Masters of Modern Architecture (3).
ARCH 656 Architectural Programming I (1).
ARCH 658 Programming and Pre-Design Issues (3).
ARCH 660 History of Urban Design (3).
ARCH 661 Eighteenth to Twentieth Century American Landscape Design (5).
ARCH 662 Twentieth Century American Landscape (3).
ARCH 663 Darwin, Humboldt, and Changing Ideas in Landscape Architecture (3).
ARCH 665 History of Urban Design (3).
ARCH 666 Cities and Towns of the Great Plains (3).
ARCH 667 City Form in the Americas (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 691 Buildings as Cultural Artifacts (3).
ARCH 693 Workplaces (3).
ARCH 694 Homeplaces (3).
ARCH 695 Environments and Cultures (3).
ARCH 696 Introduction to Human Aspects of Architectural Design (3).
ARCH 698 Introduction to Built Form and Culture Studies (3).
ARCH 700 Directed Readings in Architecture (1-3). Individual study of special topics and problems. May be repeated for credit. 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 judgements 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.
ARCH 703 Graduate Design Studio III (5). A continuation of ARCH 604 with an increased emphasis on design problems of increasing scale and complexity. Graduate level course that supplements the core syllabus of ARCH 401 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: ARCH 604 (see grading policy). LAB
ARCH 704 Graduate Design Studio IV (6). A continuation of ARCH 703 with an increased emphasis on environmental factors, including the integration of environmental systems. Graduate level course that supplements the core syllabus of ARCH 401 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: ARCH 703 (see grading policy). LAB
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 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 analogs in psychology, medicine, biology, anthropology, and other disciplines; analogs that can serve to develop problem-seeking and problem-solving skills in design. Practice sessions in morphological analysis, synectics, hsiociation, and triadization will link rigorous research to methods of application. LEC
ARCH 734 Architectural Criticism (3). A study of the literature of architectural criticism with exercises in writing criticism for architecture and urban and environmental design. Discussion of varied critical approaches. Prerequisite: Nine hours of architectural or art history. LEC
ARCH 736 Space and Light Theory in Architecture (3). This lecture/laboratory course focuses on the mutual interaction of architectural space and light. Taught from an ergonomic viewpoint, it demonstrates how the physical spaces of the built environment are modified by illumination as perceived by the human visual system. It includes the behavior of color, texture, and reflectance under electric and natural light, and the resultant impact on the visual perception of architectural space. The course is open to students of architecture, interior design, and illumination engineering. LEC
ARCH 740 Architecture History/ Theory IV (3). An examination of architectural theories through the analysis of several important or paradigmatic buildings. Graduate level course that supplements the core syllabus of ARCH 440 with weekly seminars, expanded reading lists, and additional classroom assignments. LEC
ARCH 741 History of Islamic Architecture (3). An investigation of the evolution and development of the architecture of Islam. Emphasis will be placed on institutional Islam, including ideological characteristics and geographical implications, together formulating the cultural background for the architect. Historical coverage will begin with the early medieval dynasties. Special emphasis will be placed on analyses of design values as they occurred in the architecture and urban environment, particularly in form-space relationships, light, structure, color, and decoration. Interpretive overviews will include the influence of Islam on Western culture and art. LEC
ARCH 747 Built Forms of the Great Plains (3). The focus of this course is on architecture and development patterns in the Great Plains region. Students are encouraged to examine built forms and building types of their choice as signifiers of technological, social, and cultural
ARCH 748 Native American Architecture I: Northwest Coast, Inuit, and Southwest (3). This course will acquaint students with the building traditions of Native Americans, as well as with the relationships between indigenous dwelling, climate, spatial expectations, and ways of life. The architecture of Native North American peoples will be examined in detail. A rigorous study will cover Inuit (Eskimos), Northwest Coast Indians of Canada and the United States, and Aleuts. The settlements, log-houses, kivas and pueblos of Southwestern tribes such as Hopi, Zuni, Navajo, Zuni will also be studied. Students will be required to write a paper, participate in classroom discussions, and examine the structure of Native American dwellings through models and drawings. There will be readings, lectures by colleagues from anthropology, cultural geography, history and guests from Haskell Indian Junior College. This course will be open to graduate and upper level undergraduate students in architecture, design, anthropology, and other interested students at this University. LEC

ARCH 749 Native American Architecture II: Plains, Great Basin, and Woodlands (3). This seminar will acquaint students with the building traditions of Native Americans as well as with the relationships between indigenous dwellings, climate, spatial expectations, and ways of life. The architecture of Native North American peoples will be examined in detail. A rigorous study will cover specifically the Plains Indians and their settlements and dwellings in Kansas, Missouri, Nebraska, and Colorado, with particular attention to the Pawnee. The temporary or permanent shelters of the Abenaki and 5-Nations in the East, Plains, and Woodlands cultures, the dwellings of the Northwest and Eastern Canadian and the Seminole in Florida will also be examined in detail. Students will be required to write a paper, participate in classroom discussions, and examine the structure of Native American dwellings through models and drawings. There will be readings, lectures by colleagues from anthropology, cultural geography, history, and guests from Haskell Indian Junior College. This seminar/course/workshop is open to graduate and upper level undergraduate students in architecture, design, anthropology, and other interested students at this University. 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 in providing guidelines for social and societal responsibility in design will be developed. LEC

ARCH 756 Advanced Architectural Programming (3). Advanced study of the nature and purpose of architectural programming as a process of problem definition. The principles of architectural programming are applied to projects both in case studies and in the actual development of programs that utilize real simulated clients. LEC

ARCH 761 Urban Design Workshop (5). Advanced workshop in the form, pattern, and policy implications of urban settlement. Prerequisite: ARCH 763 or consent of instructor. LEC

ARCH 762 Urban Design Studies (3). Seminar concerned with the factors, processes, techniques, and current issues in urban design practice. LEC

ARCH 763 Urban Design Analysis (3). Introductory workshop course concentrating on data collection and analysis techniques in the urban design process. This course is specifically oriented toward developing skills and techniques of social, demographic, and policy analysis, as well as the analysis of the physical characteristics of communities. LAB

ARCH 764 Site Planning (3). Graduate course that investigates issues of site planning in an urban context, design and management of urban spaces, and strategies for integrating nature and built environments. Review of history and theories of landscape design. 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 determinants of the location, spatial structure, 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 767 Natural Resources in Planning and Design (3). This course will examine alternative approaches to the allocation of natural resources in environmental design and planning, focusing on different models currently used. The underlying political, economic, and value structures within which environmental planning decisions occur will be discussed. Students will analyze physical environmental plans with the aim of clarifying the relationships between policies and action in environmental implementation. The implications of regulatory or policy alternatives on environmental design and resource allocation plans will be explored through student projects and case studies. Prerequisite: Graduate standing or consent of instructor. LEC

ARCH 769 Design and Development of Urban Housing (3). This course covers urban design and implementation of urban housing in Europe and the United States. Historic growth and current aspects will be examined and an attempt will be made to deal with design strategies for the immediate future. LEC

ARCH 770 Contemporary Issues Seminar I (1). A series of Saturday morning 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 Architecture Management: Financial and Economic Issues (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 Architecture Management: Organizational Issues (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; 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 Architecture Management: Project Delivery (3). Conventional methods for project delivery will be reviewed along with design/build, fast-track, and other techniques. The relationship of the architect and developer will also be explored, as will the relationship of project development to urban design concepts. LEC

ARCH 777 Marketing of Professional 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 Design Professions and the Law (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 patent law. In addition, the course will draw upon the knowledge and experience of members of the professional community. LEC

ARCH 790 Architectural Study Abroad: _____ (1-3). Organized field visits and study of selected architectural and urban sites abroad. Pre- and post-travel readings on themes selected to supplement and reinforce thesis or project research or areas of concentration. Students will be expected to maintain a diary and/or sketch book and submit a final paper. Prerequisite: Graduate standing and permission of instructor. FLD

ARCH 791 Design for Developing Countries (3). This course will be a combination workshop, studio, and seminar. Students will be required to do research into specific need areas in developing countries and then develop working prototype solutions that solve a specific problem that has been isolated for analysis by students, nationals of the country in question, and the instructor. Such areas will include: health-care delivery systems; food storage, preparation, harvesting, and planting; communication and teaching; water resource management; emergency shelters and other problem types that may yield to design intervention. Special emphasis will be placed on small-scale approaches appropriate to the local culture. Prerequisite: Consent of instructor. LEC

ARCH 792 Built Form and Culture Workshop (3). Studio, field work, and practical activities which exercise architectural skills in the light of new understandings of the relationships between built form and culture gained in other courses in the option. Course work will include designing in familiar and unfamiliar cultural contexts, working with nonprofessional groups, and exploration of alternative professional roles. LAB

ARCH 793 Evaluation of the Built Environment (3). An application of evaluation techniques within a specific environment. Students will select a theory of building analysis and execute a systematic evaluation. Prerequisite: Consent of instructor. LEC
Architecture; Architectural Engineering; Joint Professional M.Arch./B.S. ARCE Option

ARCH 798 Built Form and Culture Studies (3). An examination of the wide range of research in human/environment study that has implications for the design disciplines. Attempts to generate frameworks for understanding human/environment relationships that acknowledge cultural and sub-cultural contexts in architecture and urban design. LEC

ARCH 800 Special Topics in Architecture: Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the graduate program in architecture. LEC

ARCH 803 Graduate Design Studio VI (6). A continuation of previous design study with emphasis given to specific student and faculty interests and to design development. Graduate level course that supplements the core syllabus of ARCH 500 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: Completion of second-year graduate requirements (see studio grading policy). LAB

ARCH 804 Graduate Design Studio VII (6). A continuation of all previous design study with emphasis given to the synthesis of all form determinants and to design development. Graduate level course that supplements the core syllabus of ARCH 501 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: ARCH 803 (see studio grading policy). LAB

ARCH 806 Thesis or Project Research (1-6). Independent study, research, and project work leading to the submission of a master’s thesis or master’s project. May be repeated for credit. Note: In some cases a Comprehensive Examination Option may be substituted. Prerequisite: ARCH 757 and consent of instructor. RSH

ARCH 810 Computer-Aided Design (3). Graduate course that introduces the design student to fundamental principles of data-processing theories and techniques, computer-aided design technologies, and information management systems. Prerequisite: Second-year graduate standing. LEC

ARCH 850 Special Topics in Management/Practice: Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the management/practice option. IND

ARCH 852 Professional Practice (3). The essentials of office practice, including an analysis of the principal divisions of service, office procedures, and review of the Standard General Conditions of the American Institute of Architects contract. Guest lecturers and papers on specialized subjects. Graduate level course that supplements the core syllabus of ARCH 552 with weekly seminars, expanded reading lists, and additional classroom assignments. LEC

ARCH 858 Architectural Management Systems (3). Graduate course that investigates current issues in construction technologies and management techniques. LEC

ARCH 860 Special Topics in Urban Design: Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the graduate option in urban design. LEC

ARCH 861 Special Projects in Urban Design (3-6). Individual or group study of a special project or problem in urban design. Prerequisite: Graduate standing and consent of instructor. RSH

ARCH 864 Urban Design Tutorial (1). Readings and discussion covering each area of the comprehensive examination—theory, practice, methods, and the concentration area. Prerequisite: Consent of instructor. RSH

The following course is cross-referenced as available to or recommended for students in Architecture: AMS 798 Studies in:_____

Architectural Engineering

Architectural engineering at KU is administered jointly by the School of Engineering and the School of Architecture and Urban Design.

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.arce.ku.edu.

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 degree is an ABET-accredited professional degree that requires a minimum of five years and 164 credit hours to complete.

The Joint Professional M.Arch./B.S. in Architectural Engineering option allows a student to receive the NAAB-accredited M.Arch. with a minimum of 45 graduate credit hours after the completion of the B.S. degree. The minimum time required to complete the two degrees is six and one-half years of full-time study. Substitutions in the prescribed curriculum may be made only with the approval of the architectural program graduate studies committee and architecture chair.

Admission to the professional M.Arch. program is based on the following criteria:

1. Minimum academic background for admission to the Graduate School as outlined under Admission in the General Information chapter of this catalog.

2. Completion of 9 credit hours in architectural graphics (ARCH 113 and ARCH 114 or above), 24 credit hours in architectural design (ARCH 200, ARCH 201, ARCH 300, and ARCH 301 or above), 12 credit hours in architectural engineering design (ARCE 680 and ARCE 681), 9 credit hours in architectural history (ARCH 640, ARCH 641, and ARCH 642), and 5 credit hours in building technology and programming (ARCH 626, ARCH 656, and ARCH 658).

3. Completion of all other course requirements to receive the B.S. degree.

4. Portfolio review by the architecture program graduate studies committee to determine the quality of the student’s previous academic and design work. After the portfolio review, the graduate studies committee may recommend that the student complete up to two additional design courses and one additional architectural elective course (15 credit hours) to receive the professional M.Arch. degree, which may result in up to two additional semesters of academic study.

The minimum requirements for the NAAB-accredited degree are the same as those of Year Three of the Professional M.Arch. Program listed above (39 graduate credit hours) and an additional 6 graduate credit hours in the courses ARCH 740 and ARCH 665. Up to 6 hours of architectural course work at the 600 level or above from the B.S. degree may be substituted for required courses in the professional M.Arch. if these hours are in excess of the 164 total credit hours required for graduation from the B.S. in Architectural Engineering Program.
Urban Planning

Chair: James M. Mayo
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7614, (785) 864-4184
www.saud.ku.edu
Professors: Black, Mayo
Associate Professors: Luckey, McClure
Assistant Professors: Ellis, White
Visiting Assistant Professor: Serda
Lecturers: Crawford, Dow, Englehart, Enslinger, Palos, Prem

The Master of Urban Planning (M.U.P.) is a graduate professional degree directed toward 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 housing and development planning, land use and environmental planning, transportation planning, and urban design concentrations.

Admission

Persons whose previous records indicate ability to succeed with advanced work may be admitted to the Graduate School through the Graduate Program in 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 Graduate School reviews the student’s academic background 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 described below.

Graduate Record Examination scores are not required. However, it is recommended that a student with a grade-point average below 3.0 and/or low (below C) grades in courses with economics and mathematical content, or lack of undergraduate courses in these areas, submit GRE scores. Thus, the faculty may be better equipped to evaluate the student’s prospects for graduate study in planning at KU.

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. Two copies 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 Graduate Record Examinations, if available;
6. Test of English as a Foreign Language scores, if the student’s native language is not English; and
7. Application fee:
   - Domestic students applying online ........................................ $45
   - Domestic students applying on paper .................................. $55
   - International students applying online .................................. $55
   - International students applying on paper ................................ $60
   - Please send a nonrefundable check or money order payable to the University of Kansas.

There is no specific deadline for receiving applications, but candidates are urged to submit them as early as possible. It can take considerable time to complete and process an application file, especially if materials are being sent from abroad. Students wishing to be considered for Graduate School Fellowships should submit application materials by January 15.

Submit your application to the Graduate School online at www.grad.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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

UBPL 736 Planning Institutions ............................................. 3
UBPL 783 Professional Practice ........................................... 3

Techniques

Required courses (9 hours)
UBPL 705 Economic Analysis for Planners ................. 3
UBPL 741 Quantitative Methods I .............................. 3
UBPL 742 Quantitative Methods II ............................ 3

Theory

UBPL 815 History and Theory of the Planning Process ...... 3
UBPL 850 Urban and Regional Theory ......................... 3

Concentrations. The curriculum requires each student to specialize in one substantive area from the following: housing and development planning, land use and environmental planning, transportation planning, and urban design. The student should declare the major area by the second semester of the course of study. 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 and Land Use Planning  
UBPL 730 Introduction to Land Use Planning ........................................ 3  
UBPL 735 Site Planning ........................................................................ 3  
UBPL 738 Introduction to Environmental Planning II .......................... 3  
UBPL 739 Issues in Growth Management .............................................. 3  
UBPL 765 Planning and the Natural Environment ................................. 3

Housing and Development Planning  
UBPL 710 Introduction to Housing Policy ............................................. 3  
UBPL 714 Local Economic Development Planning ................................ 3  
UBPL 716 Community and Neighborhood Revitalization ................... 3  
UBPL 718 Downtown Planning ............................................................ 3  
UBPL 764 Real Estate Development I ................................................... 3

Physical Development Planning  
UBPL 730 Introduction to Land Use Planning ........................................ 3  
UBPL 735 Site Planning ........................................................................ 3  
UBPL 764 Real Estate Development I ................................................... 3  
UBPL 766 Urban Design Implementation ............................................ 3  
ARCH 682/UBPL 682 Twentieth-century American Landscape .............. 3

Transportation Planning  
UBPL 730 Introduction to Transportation Planning ................................ 3  
UBPL 756 Advanced Seminar in Urban Transportation Planning ........... 3  
UBPL 758 Urban Mass Transportation .................................................. 3

Free Electives. Besides the specialty courses, thesis students must take 3 additional credit hours, and non-thesis students must take 9 additional credit hours of elective courses, either in or outside the Graduate Program in 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. Thus, 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 advisor, a thesis proposal to be submitted to the faculty thesis committee no later than the first day of classes of the semester before the semester in which the student plans to graduate. 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 test the student’s competence as a generalist/specialist planner. The examination includes five questions, as follows: one question each on Planning Theory, Urban and Regional Planning, and Planning Methods, two questions in the student’s concentration. No academic credit is given for the examination.

Urban Planning Courses  
UBPL 500 Planning the American City .................................................... 3  
UBPL 502 Special Topics in Urban Planning: _______ (1-6)  
UBPL 522 History of the American City I .............................................. 3  
UBPL 538 Introduction to Environmental Planning I .......................... 3  
UBPL 555 Planning and Environmental Values .................................... 3  
UBPL 610 Cities and Regions of the World ............................................ 3  
UBPL 662 Twentieth Century American Landscape ................................ 3  
UBPL 666 Introduction to Urban Design ............................................... 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 705 Economic Analysis for Planners ....................................... 3  

The Fiske Guide to Colleges cites the School of Architecture and Urban Design as one of the strengths of KU.

Four campus buildings, Spooner Hall, Dyche Hall, Strong Hall, and Lippincott Hall, are listed on the National Register of Historic Places.
capital improvement programming, tax incentives and other methods to regulate the implementation of planning knowledge in each concentration. Emphasis is on the impact of the law on planning rather than on specific content of individual cases. LEC
UBPL 738 Introduction to Environmental Planning II (3). The course seeks to unify two broad themes in environmental planning: policy formation and physical design. These are interrelated and depend upon each other for meaning. Laws and governmental policies set the framework for defining appropriate environmental goals or ends. The means of environmental planning require understanding of natural processes, which cannot be ignored. The subject matter of this course draws from a wide variety of disciplines, including law, political science, soil science, biology, and geography. Same as UBPL 538 but gives graduate credit. LEC
UBPL 739 Issues in Growth Management (3). This seminar deals with the ability of state and local governments to make decisions concerning growth and to use planning and regulation to guide development. The emphasis in this course is to create policy documents for both urban and rural contexts. Various techniques such as impact fees, urban limit lines, agricultural lands protection and adequate public facilities will be analyzed and outlined by students. LEC
UBPL 741 Quantitative Methods I (3). Introduction to quantitative techniques utilized in planning analysis. Introduction to inferential statistics, computer programming, 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 extensive use of microcomputers. Prerequisite: UBPL 741 or consent of instructor. LEC
UBPL 750 Introduction to Transportation Planning (3). Introduction to transportation as a specialist planning activity. Basic issues in urban highway and mass transit planning. The physical characteristics of urban transportation systems. Transportation planning according to travel demand requirements. Evaluation of alternative transportation plans. Environmental and community impacts of plans. Institutional aspects of transportation and transportation legislation. LEC
UBPL 756 Advanced Seminar in Urban Transportation Planning (3). The course is divided into two parts. The first part covers the area of land use modeling and its mathematical foundations; it includes linear programming, models of residential location and certain maximum entropy models. In the second part, the Urban Transportation Planning System (UTPS) is discussed. Students obtain a working knowledge of certain microcomputer packages used for short-term as well as large scale transportation planning. Prerequisite: UBPL 750 or consent of instructor. LEC
UBPL 758 Urban Mass Transportation (3). An overview of urban mass transportation in the United States today. Emphasis is on general planning of transit systems rather than details of engineering or hardware. Covers history of urban transit, federal transit programs, comparison of conventional and non-conventional technologies, 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, technical issues and contemporary issues and controversies in the field of preservation. Projects will deal with philosophic and current issues in preservation. LEC
UBPL 761 Historic Survey Methodology (3). This class will focus on methodologies for survey and documentation of historic buildings and sites. The class will cover not only the techniques of survey, but also the effectiveness and usefulness of survey results for national, state, and local historic properties. It will review trends in survey techniques such as using GIS. Students will have some time on computers for internet searching, and introductory work with Access as a database for compiling survey results. LEC
UBPL 763 Professional Practice (3). An examination of social relationships that the urban planner encounters in professional practice. Study of various planning roles in relation to the client and community within private and public domains. Emphasis is placed on the qualitative aspects of role taking with regard to bureaucratic organizational life. Prerequisite: UBPL 815 or consent of instructor. LEC
UBPL 764 Real Estate Development I (3). This course is designed to provide a working knowledge of the mechanics of real estate investment analysis. As a planning 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 taxes 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 Planning and the Natural Environment (3). The course traces the development of the theory and practice of environmental planning from its roots in traditional planning theory, to its applications in contemporary environmental management, and through current efforts to encourage sustainability. 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 reign will be examined to illustrate the application of these techniques. Prerequisite: Successful completion of UBPL 764 or permission 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. RSH
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 the past century. The second presents the major alternative theories of the planning process. The third deals with how these theories are applied in practice and the major issues that arise. LEC
UBPL 850 Urban and Regional Theory (3). The course covers the main topics in economic and ecological theory and regional analysis. The part dealing with urban theory covers topics of urban growth, sectoral interdependencies, Von Thunen theory, market failures and public policy issues. Inter-urban and intra-urban ecology are also discussed. The regional part of the course examines different regional geographic structures and their evolutionary patterns, including theories of Weber, Hotelling, Christaller, Losch, and extensions. Input-output and export base theory are also presented. LEC

Joint Degree Programs

M.U.P. and Master of Architecture
This joint degree combines in a four-year program the normal two-year M.U.P. degree and the three-year M.Arch. degree, both offered through the School of Architecture and Urban Design. The program is intended for students interested in careers in urban design. A total of 133 credit hours is required, consisting of 40 hours in urban planning and 94 hours in architecture. Applicants must meet admission requirements of both the School of Architecture and Urban Design and the Graduate Program in Urban Planning. 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 and Urban Design 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 inter-
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 for the program must meet the admission requirements of the School of Law and of the Graduate Program in 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 Graduate Program in 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 Graduate Program in 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 program chairs.

See also the School of Law 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 and Urban Design and the Master of Public Administration degree offered through the College of Liberal Arts and Sciences. The program is designed for students interested in careers in urban policy planning and urban management.

Contact the Department of Public Administration or the Graduate Program in Urban Planning for information about degree requirements.

See also Government: Public Administration in the College of Liberal Arts and Sciences chapter.
### School of Business

William Fuerst, Dean  
Summerfield Hall, 1300 Sunnyside Ave., Room 203  
Lawrence, KS 66045-7585, (785) 864-7575

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission</td>
<td>85</td>
</tr>
<tr>
<td>Student Services</td>
<td>86</td>
</tr>
<tr>
<td>Advising</td>
<td>86</td>
</tr>
<tr>
<td>Richard S. Howey Reading Room</td>
<td>86</td>
</tr>
<tr>
<td>Wagnon Microcomputer Laboratory</td>
<td>86</td>
</tr>
<tr>
<td>Harper Computing Classroom</td>
<td>86</td>
</tr>
<tr>
<td>Employment Opportunities &amp; the Business</td>
<td>86</td>
</tr>
<tr>
<td>Career Services Center</td>
<td>86</td>
</tr>
<tr>
<td>Baccalaureate Preparation</td>
<td>86</td>
</tr>
<tr>
<td>Master of Business Administration</td>
<td>86</td>
</tr>
<tr>
<td>M.B.A. Admission Requirements</td>
<td>87</td>
</tr>
<tr>
<td>In-residence M.B.A. Degree Program</td>
<td>87</td>
</tr>
<tr>
<td>Degree Requirements</td>
<td>87</td>
</tr>
<tr>
<td>Evening Professional M.B.A. Degree Program</td>
<td>87</td>
</tr>
<tr>
<td>Degree Requirements</td>
<td>87</td>
</tr>
<tr>
<td>Master of Accounting &amp; Information Systems</td>
<td>87</td>
</tr>
<tr>
<td>Degree Requirements</td>
<td>88</td>
</tr>
<tr>
<td>M.A.I.S. Requirements</td>
<td>88</td>
</tr>
<tr>
<td>Master of Science with a Major in Business</td>
<td>88</td>
</tr>
<tr>
<td>Degree Requirements</td>
<td>88</td>
</tr>
<tr>
<td>Finance, Human Resources, &amp; Information Systems Concentrations</td>
<td>88</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; J.D.</td>
<td>89</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>89</td>
</tr>
<tr>
<td>Combined Degree Requirements</td>
<td>89</td>
</tr>
<tr>
<td>Specific Course Requirements</td>
<td>89</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; Ph.D. in Nursing</td>
<td>90</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; M.H.S.A.</td>
<td>90</td>
</tr>
<tr>
<td>Combined M.B.A. &amp; Area Studies</td>
<td>90</td>
</tr>
<tr>
<td>M.B.A. with a Concentration in Petroleum Management</td>
<td>90</td>
</tr>
<tr>
<td>Doctor of Philosophy</td>
<td>90</td>
</tr>
<tr>
<td>Admission</td>
<td>90</td>
</tr>
<tr>
<td>Ph.D. Degree Requirements</td>
<td>90</td>
</tr>
<tr>
<td>Concentration</td>
<td>90</td>
</tr>
<tr>
<td>Supporting Areas</td>
<td>91</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>91</td>
</tr>
<tr>
<td>Teaching</td>
<td>91</td>
</tr>
<tr>
<td>Examinations</td>
<td>91</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>91</td>
</tr>
<tr>
<td>Assistantships</td>
<td>91</td>
</tr>
<tr>
<td>Fellowships &amp; Grants</td>
<td>91</td>
</tr>
<tr>
<td>Business Courses</td>
<td>91</td>
</tr>
<tr>
<td>Accounting Course</td>
<td>91</td>
</tr>
<tr>
<td>Business Courses</td>
<td>91</td>
</tr>
<tr>
<td>Business Law Courses</td>
<td>98</td>
</tr>
<tr>
<td>Decision Sciences Course</td>
<td>98</td>
</tr>
<tr>
<td>Finance Course</td>
<td>98</td>
</tr>
<tr>
<td>Information Systems Technology Course</td>
<td>98</td>
</tr>
<tr>
<td>International Business Course</td>
<td>98</td>
</tr>
<tr>
<td>Management Course</td>
<td>98</td>
</tr>
<tr>
<td>Marketing Course</td>
<td>98</td>
</tr>
</tbody>
</table>
School of Business

The University of Kansas School of Business is accredited by the Association for the Advancement of Collegiate Schools of Business–International. Four graduate degree programs are offered: the Master of Business Administration, Master of Science, Master of Accounting and Information Systems, and Doctor of Philosophy. Four degree programs are offered jointly with other departments: the combined M.B.A./J.D. with the School of Law, the combined M.B.A./Ph.D. in Nursing with the School of Nursing, the combined M.B.A./Master of Health Services Administration with the Department of Health Policy and Management, the combined M.B.A./Area Studies M.A. with Russian and East European Studies or Latin American Studies, and the M.B.A. with a concentration in petroleum management with the School of Engineering. General admission requirements and the content of each of these programs are discussed below. Graduate students frequently take some elective classes on KU’s Edwards Campus.

Admission

All graduate programs are open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records, scores on the required standardized examination, and prior work experience indicate that they have the capability to complete the program. Admission to all programs in business is limited on the basis of space, facilities, faculty, and other resources.

Applicants for all graduate programs must take the Graduate Management Admission Test given by the Educational Testing Service, Princeton, New Jersey. The GMAT is administered in most foreign countries and by appointment at designated testing centers throughout the United States. The test typically is taken during the academic year before the term for which admission is sought. M.B.A./J.D. applicants must take the GMAT. The Law School Admission Test is not accepted in lieu of the GMAT. Students whose native language is not English or who have not completed a degree from a college or university in the United States, Great Britain, Canada, or Australia must also have a score of at least 570 (600 for the M.B.A. program) on the Test of English as a Foreign Language. A minimum score of 57 on each of the three sections of the TOEFL is required. For students taking the computerized version of the TOEFL, an overall score of 230 is required (250 for the M.B.A. program), with a minimum score of 23 on each of the three sections of the test.

All applications for admission to the M.B.A. M.S., or M.A.L.S. programs must include (1) a Graduate School application form, (2) three essays, (3) two official transcripts of each college and university record, (4) two letters of recommendation from faculty members and/or employers, (5) scores on the GMAT and scores on the TOEFL if required, (6) a $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, (7) a current résumé, and (8) a signed academic honor code statement.

Completed applications are reviewed by committee, and action is taken on them periodically throughout
the year. Each applicant is notified by letter of the action taken on his or her application.

All admissions to any graduate program in business are subject to and in accordance with all the basic rules and regulations of the Graduate School as described in this catalog.

Please contact the Business School Student Services Office, (785) 864-3844, or consult the Web site, www.business.ku.edu, for application deadlines.

Submit your application to the Graduate School online at www.graduat.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Student Services
Advising
Advising for graduate students is coordinated by the Graduate Advising Center in 206 Summerfield Hall. The directors of the programs and their assistants are available to give advice about program requirements, course prerequisites, and program planning. A graduate faculty adviser is designated for each concentration and is available to help the student develop the most effective program for attaining her or his educational and career goals.

Richard S. Howey Reading Room
The Richard S. Howey Reading Room, in the west wing of the ground floor of Summerfield Hall, provides a large study area and network access to many electronic databases in business and economics and to the Internet. 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 Microcomputer Laboratory
The Wagnon Laboratory in Summerfield Hall is available to business undergraduate and graduate students for classroom assignments and individual research projects. About 40 computers and 65 software programs are available. All computers are Pentiums.

Harper Computing Classroom
Equipped with 34 Pentium 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 of Business maintains a career services center in Summerfield Hall. The faculty and career services staff are committed to providing a strong student-oriented career services program to help students develop career objectives and target job opportunities.

The Business Career Services Center 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 concentration 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 on the School of Business Web site, 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 are offered in finance, human resources, and information systems.

The Master of Accounting and Information Systems program offers a one-year degree for students with baccalaureate degrees in business or accounting equivalent to that required for accreditation by the AACS B. 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.

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 within a specific area of business management.

KU offers the M.B.A. program for in-residence (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
In the evening M.B.A. degree program, the curriculum is designed to accommodate students who are employed full-time. This program is tailored for working professionals who aim to advance their careers or acquire new skills. The evening classes are scheduled to fit the busy schedule of working individuals, offering a learning experience that is both convenient and enriching. The program is an integral part of the university’s commitment to providing high-quality education, allowing students to focus on their professional development while receiving a well-rounded education.

### Degree Requirements

A minimum of 52 credit hours is required, satisfying the following:

**Business Course Requirements:**

1. Required Courses (24 hours)
   - BUS 701 Organizational Behavior (2)
   - BUS 702 Managerial Economics (2)
   - BUS 703 Financial Accounting (2)
   - BUS 704 Statistical Decision Making (2)
   - BUS 709 Financial Management (2)
   - BUS 711 Marketing Management (2)
   - BUS 715 International Business Immersion Week (2)
   - BUS 720 Strategic Management (2)
   - BUS 723 Professional Development Skills I (2)

2. Advanced Business Elective Courses (28 hours)
   - BUS 710 Managerial Accounting (2)
   - BUS 719 Operations Management (2)
   - BUS 724 Business Law (2)
   - BUS 725 Human Resources Management (2)
   - BUS 726 Global Economic Environment of Business (2)
   - BUS 727 Introduction to the Legal Environment of Business (2)
   - BUS 728 Data Analysis (2)
   - BUS 729 Business Ethics (2)
   - BUS 730 Business Law II (2)
   - BUS 731 Human Resources Management II (2)
   - BUS 732 Global Economic Environment of Business II (2)
   - BUS 733 Introduction to the Legal Environment of Business II (2)
   - BUS 734 Data Analysis II (2)
   - BUS 735 Business Ethics II (2)

3. Designation of a Concentration:
   - A concentration is optional. Concentrations available with the M.B.A. degree are e-business, finance, human resources management, information technology, international business, management, and marketing.

4. Degree Requirements:
   - A total of 52 hours is required, consisting of 24 core and 28 elective hours. See the requirements listed for the In-residence M.B.A. degree program.

### Master of Accounting and Information Systems

The Master of Accounting and Information Systems at KU offers students an opportunity to study accounting and information systems topics in greater detail than at the undergraduate level. M.A.I.S. students must earn a concentration in one of three areas:

- Accounting/Auditing
- 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
The Master of Business Administration program is designed for graduates from areas other than business administration.

See the School of Nursing chapter for information about the combined M.B.A./Ph.D. in Nursing degree.

See www.law.ku.edu for online information about KU’s School of Law.

The Master of Accounting & Information Systems; M.S. with a Major in Business

interpersonal skills needed for a successful career in accounting and information systems.

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 to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Degree Requirements

1. Candidates for the M.A.I.S. 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. This includes 15 to 18 hours of accounting and information systems classes, depending on which electives are chosen. At least 24 hours of course work must be numbered 700 or above.

2. Candidates with undergraduate degrees in business without an accounting major must complete 18 hours of undergraduate accounting classes, of which only 6 hours may count toward their master’s degree, for a total of 42 hours.

3. Candidates without undergraduate degrees in business must complete 18 hours of undergraduate accounting classes, 37 hours of business foundation courses, and 12 hours of graduate accounting and information systems courses, for a total of 67 hours. They must already have taken introductory courses in financial accounting and managerial accounting (BUS 240 and BUS 241 or equivalent). Both courses can be taken during the summer before beginning the M.A.I.S. program. Admission is contingent on completing these courses.

M.A.I.S. Requirements. Required for students with undergraduate accounting or business degrees:

* The tax concentration requires 10 hours. One less hour of business or accounting elective credit is required. The total remains 30 hours.

Interdisciplinary Accounting and Information Systems Concentrations are offered in finance, human resources, and information systems. Availability of a concentration depends on sufficient demand for that concentration, as determined by the School of Business.

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.

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 to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Degree Requirements

Candidates must complete a minimum of 30 semester hours of graduate credit with a maximum of 6 hours in courses numbered below 700. Students must fulfill the following requirements:

1. Earn credit in required courses in a concentration.
2. Complete BUS 720 Strategic Management (2 hours) unless it has been waived.
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.

Finance, Human Resources, and Information Systems Concentrations. For information, contact the Director of Master’s Programs, School of Business.
Combined M.B.A. and J.D.

This program combines four years of study in 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 Requirements

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 first year. The Law School Admission Test and the Graduate Management Admissions 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 enter 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 program 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 42 credit hours of graduate work in business.

The School of Business follows Graduate School 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:

### First Year
- **Business:** 34
- **Law:** 32
- **Total:** 66

### Second Year
- **Business:** 34
- **Law:** 24*
- **Total:** 58

### Third Year
- **Business:** 6
- **Law:** 20
- **Total:** 26

### Fourth Year
- **Business:** 6
- **Law:** 20
- **Total:** 26

### Total Credit Earned
- **Business:** 100
- **Law:** 100
- **Total:** 200

*Must include Professional Responsibility

Specific Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW 804 and LAW 805</td>
<td>Civil Procedure I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 809 and LAW 810</td>
<td>Contracts I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 814</td>
<td>Criminal Law</td>
<td>2</td>
</tr>
<tr>
<td>LAW 816</td>
<td>Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LAW 820 and LAW 821</td>
<td>Lawyering I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 826 and LAW 827</td>
<td>Property I and II</td>
<td>5</td>
</tr>
<tr>
<td>LAW 831</td>
<td>Torts I</td>
<td>4</td>
</tr>
</tbody>
</table>

Second- and Third-year Courses (12 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW 973</td>
<td>Commercial Law: Secured Transactions</td>
<td>3</td>
</tr>
<tr>
<td>LAW 982</td>
<td>Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 908</td>
<td>Evidence</td>
<td>3</td>
</tr>
<tr>
<td>LAW 972</td>
<td>Professional Responsibility</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: In addition to all J.D./M.B.A. program course requirements, students must satisfy the upper-level writing requirement in the School of Law. See the current School of Law Catalog for details.

Law Courses Required of All Joint Degree Candidates

(for a total of at least 21 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW 913</td>
<td>Federal Income Taxation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 855</td>
<td>Taxation of Business Enterprises</td>
<td>3</td>
</tr>
<tr>
<td>LAW 865 and LAW 866</td>
<td>Business Associations I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 874</td>
<td>Commercial Law: Payment Systems</td>
<td>3</td>
</tr>
<tr>
<td>and two of the following:</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>LAW 850</td>
<td>Administrative Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 878</td>
<td>Advanced Topics in Labor and Employment</td>
<td>3-3</td>
</tr>
<tr>
<td>LAW 856</td>
<td>Agriculture Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 863</td>
<td>Antitrust Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 868</td>
<td>Business Planning Seminar</td>
<td>3</td>
</tr>
<tr>
<td>LAW 869</td>
<td>Capital Raising by Privately Held Business Firms</td>
<td>3</td>
</tr>
<tr>
<td>LAW 872</td>
<td>Commercial Arbitration</td>
<td>3</td>
</tr>
<tr>
<td>LAW 888</td>
<td>Copyright Law and Digital Works</td>
<td>3</td>
</tr>
<tr>
<td>LAW 889</td>
<td>Creditors' and Debtors' Rights</td>
<td>3</td>
</tr>
<tr>
<td>LAW 903</td>
<td>Employment Discrimination Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 925</td>
<td>Employment Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 906</td>
<td>Estate Planning: Principles</td>
<td>3</td>
</tr>
<tr>
<td>LAW 907</td>
<td>Estate Planning: Practice</td>
<td>3</td>
</tr>
<tr>
<td>LAW 915</td>
<td>Federal Tax Procedure</td>
<td>2</td>
</tr>
<tr>
<td>LAW 917</td>
<td>Governmental Control of Land Development</td>
<td>2-3</td>
</tr>
<tr>
<td>LAW 926</td>
<td>Insurance</td>
<td>3</td>
</tr>
<tr>
<td>LAW 927</td>
<td>International Business Transactions</td>
<td>3</td>
</tr>
<tr>
<td>LAW 939</td>
<td>Labor Law I</td>
<td>3</td>
</tr>
<tr>
<td>LAW 941</td>
<td>Land Transactions</td>
<td>3</td>
</tr>
<tr>
<td>LAW 968</td>
<td>Patent, Copyright, and Trademark Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 971</td>
<td>Product Liability</td>
<td>3</td>
</tr>
<tr>
<td>LAW 897</td>
<td>Qualified Retirement Plans</td>
<td>1</td>
</tr>
<tr>
<td>LAW 980</td>
<td>Regulation of Air and Water</td>
<td>3</td>
</tr>
<tr>
<td>LAW 981</td>
<td>Regulation of Toxic Substances and Hazardous Waste</td>
<td>2-3</td>
</tr>
<tr>
<td>LAW 982</td>
<td>Regulatory Law and Policy</td>
<td>3</td>
</tr>
<tr>
<td>LAW 986</td>
<td>Securities Regulations</td>
<td>5</td>
</tr>
<tr>
<td>LAW 989</td>
<td>Tax Policy</td>
<td>3</td>
</tr>
<tr>
<td>LAW 990</td>
<td>Taxation of Mergers and Acquisitions</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: If a student elects either Securities Regulation or any two of the above courses with a combined credit of 5 hours, the total required law school credit is reduced to 20 hours and law school electives are increased to 12 hours.

Law School Electives (11 credit hours)

### Business Courses Required of All Joint Degree Candidates (40 credit hours):

#### Foundation Courses: Required of All Students

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 701</td>
<td>Organizational Behavior</td>
<td>2</td>
</tr>
<tr>
<td>BUS 702</td>
<td>Managerial Economics</td>
<td>2</td>
</tr>
<tr>
<td>BUS 703</td>
<td>Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUS 704</td>
<td>Statistical Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>BUS 709</td>
<td>Financial Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 711</td>
<td>Marketing Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 715</td>
<td>International Business Immersion Week</td>
<td>1</td>
</tr>
<tr>
<td>BUS 720</td>
<td>Strategic Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 723</td>
<td>Professional Development Skills I</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Environmental Courses (choose one of two): | 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 707</td>
<td>Global Economic Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>BUS 708</td>
<td>Introduction to the Legal Environment of Business</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Breadth Courses (choose three of four): | 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 705</td>
<td>Human Resources Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 706</td>
<td>Managerial Information Systems</td>
<td>2</td>
</tr>
<tr>
<td>BUS 710</td>
<td>Managerial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUS 719</td>
<td>Operations Management</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Business Electives | 16

For additional information, review the materials on the regular programs in the School of Law Catalog and the M.B.A. Program section of this chapter of the catalog, or contact the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 West 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 66045-7585.
Combined M.B.A. and Ph.D. in Nursing

The School of Business and the School of Nursing offer a combined M.B.A. and Ph.D. in Nursing degree program, consisting of 40 hours of graduate business courses and 54 hours of doctoral nursing courses. The combined program takes four years to complete and results in separate M.B.A. and Ph.D. in Nursing degrees. Contact the Director of the M.B.A. Program, 255G KU Edwards Campus, 12690 Quivira Rd., Overland Park, KS 66213-2402, (913) 897-8412, or the Nursing Student Affairs Office, Mail Stop 2029, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1621, for more information.

Combined M.B.A. and M.H.S.A.

The School of Business and the Department of Health Policy and Management offer a combined M.B.A. and Master of Health Services Administration degree program consisting of 33 credit hours of graduate business courses and 34 credit hours of graduate M.H.S.A. courses. The combined program results in separate M.B.A. and M.H.S.A. degrees. Contact the Director of the M.B.A. Program, 255G KU Edwards Campus, 12690 Quivira Rd., Overland Park, KS 66213-2402, (913) 897-8412.

Combined M.B.A. and Area Studies

The School of Business and the graduate studies programs in Russian and East European Studies and Latin American Area Studies offer a joint degree program that requires completion of 64 hours of course work. After all degree requirements for the joint program have been met, a Master of Arts degree in either Russian and East European Studies or Latin American Area Studies and a Master of Business Administration degree are awarded.

M.B.A. with a Concentration in Petroleum Management

For information on the M.B.A. with a concentration in petroleum management, contact the Director of Master's Programs, School of Business, or the Associate Dean, Graduate Studies, School of Engineering.

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, 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 spring 2003, 31 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 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. 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 of a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Ph.D. Degree Requirements

By the end of the fourth 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, must demonstrate proficiency in teaching, and must successfully complete the following six tool area courses: BUS 915 Seminar in Organization Behavior, BUS 916 Seminar in Organization Theory, ECON 700 Survey of Microeconomics, ECON 701 Survey of Macroeconomics, BUS 920 Probability for Business Research, and BUS 921 Statistics for Business Research. If an aspirant is already proficient in some of these courses, they can be replaced by advanced courses in the same area. The timing of the six tool area courses is determined by the aspirant's faculty adviser in consultation with the area faculty and depends on the aspirant's background and research interests. At or before the end of the aspirant's fourth 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 a concentration, supporting areas, and preparation in research methodology.

Concentration. Each aspirant, with the help of her or his faculty adviser and the faculty, selects a concentration from the traditional business disciplines of accounting or 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, information systems, 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 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.

Research Methodology. The aspirant must demonstrate adequate preparation in research methodology beyond that required for the qualifier assessment. At least one research methodology course must be taken beyond courses forming the concentration. This requirement may be satisfied as part of the supporting area courses.

Teaching. To prepare themselves for future teaching duties, students attend a teaching seminar early in the program. They gain teaching experience through teaching one course each of two 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
Most 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 assistants. Subsequently, most doctoral students are appointed as graduate teaching assistants. Most doctoral students also receive dissertation fellowships while writing their theses. During 2002-03, a 50-percent-time graduate research assistantship paid about $1,270 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 Test of Spoken English administered by the Applied English Center at KU. During 2002-03, a graduate teaching assistantship paid about $1,295 per month. See also Financial Aid in the General Information chapter of this catalog.

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 the University of Kansas Graduate School. Several dissertation fellowships normally are awarded annually. These awards are approximately equal to the amount the student would receive as a research assistant and 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 66045-7535.

Business Courses

- Accounting Course
  ACCT 500 Individual Research in Accounting: _____ (1-5).

- Business Courses
  BUS 500 Individual Research in Business (1-5),
  BUS 511 Intermediate Accounting for Finance (3),
  BUS 599 Internship in Business Administration (2-3),
  BUS 608 Database Management Systems (3),
  BUS 701 Organizational Behavior (2). This course focuses on human behavior in organizations. It helps the student learn to think systematically and critically about organizations, to appreciate knowledge building in the organization sciences, and to apply that knowledge in the work setting. Topics covered may include: individual differences and motivation, work and group design, leading and decision making, organization design and culture, and organization change and development. LEC
  BUS 702 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 individual markets reacting to supply and demand forces, 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 modes of competition, market structure, and economic efficiency. LEC
  BUS 703 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. LEC
  BUS 704 Statistical Decision Making (2). (FS) 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 the 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 software is used to supplement data analysis and aid 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, correlation, linear regression, and control charts. LEC
  BUS 705 Human Resources Management (2). The purpose of this course is to equip managers to create a sustainable competitive advantage through strategic investment in human resources. The management of human resources - people and their human capital - is approached from the perspective of the practicing manager as opposed to
BUS 707 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 regulatory policies affect global markets and firm performance. LEC

BUS 708 Introduction to the Legal Environment of Business (2-3). A course focused on understanding legal rights and duties and ethical responsibilities in the business environment and identifying 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

BUS 709 Financial Management (2-3). (FS) This course provides an overview of the problems associated with the financial management of business firms. The focus is on the practices followed by managers in raising and investing capital so as to maximize value. Prerequisite: BUS 703. LEC

BUS 710 Managerial Accounting (2). Managerial accounting provides information to the business manager, such as supervisors and executives. The course describes the process through which economic information is captured 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. LEC

BUS 711 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 decisions related to positioning, products, pricing, distribution, and promotion. LEC

BUS 712 Total Quality Management Immersion Week (1). LEC

BUS 713 Market Based Management Immersion Week (1). LEC

BUS 714 Entrepreneurship Immersion Week (1). LEC

BUS 715 International Business Immersion Week (1). LEC

BUS 716 Technology Management and Internet Operations Immersion Week (1). This immersion week is designed to introduce students to the Internet and train them to be proficient in electronic mail, groupware, file transfer, agent technology, web browsing, and home page development. These skills will assist students in all of their MBA course work. This course will also introduce students to the field of technology management and technology transfer which is crucial for the introduction, user acceptance, and marketing of technology. This week will also help students understand new career areas that are developing in MIS and in the intersection of MIS and other areas, such as the electronic commerce field, which is an intersection of MIS, marketing, and finance. LEC

BUS 718 Total Quality Management (2). (FS) (Core course at the Regents Center only). The purpose of this course is to investigate the total quality management (TQM) philosophy. The assumptions and guiding principles of this management philosophy are explored as is the implication of managing based upon these principles. Topics covered include, the role of the customer, the rationality for quality, the advantages of viewing the organization as a system, the implications of variation for decision making, the importance of continual learning, the issues surrounding empowerment, and the responsibilities of managers in this paradigm. Attention will be paid to both this course and the Total Quality Management Immersion week (BUS 712). Prerequisite: BUS 704. LEC

BUS 719 Operations Management (2). (S) (Core course on Lawrence campus only). This course examines the business from an operations mindset. Topics covered include supplier relationships, JIT and Kanban, quality, customer-focus, and manufacturing as a competitive advantage. A systems integration view will be stressed instead of a functional view. Prerequisite: BUS 704 and BUS 712. LEC

BUS 720 Strategic Management (2). Strategic Management has as its primary objective the development of an understanding of the role of general management and the formulation of strategy. The course will address the development of organizational objectives and the formulation of strategies at the corporate, business, and operating levels. In addition, the course will address the various issues related to the effective implementation of such strategies. Prerequisite: BUS 701, BUS 709, and BUS 710 or BUS 711. LEC

BUS 723 Professional Development Skills I (1). A series of workshops for graduate business students which provide foundation and supplemental skill development in such areas as computer usage, business writing, career development, communications, presentations, negotiations, ethical behavior, and market-based thinking. Graded on satisfactory/unsatisfactory basis. FLD

BUS 724 Professional Development Skills II (1). A continuation of Professional Development Skills I. Graded on satisfactory/unsatisfactory basis. FLD

BUS 730 Management Accounting for Advanced Technology (2). An extended analysis of issues related to the impact of advanced technology on management information needs for the effective, efficient, and profitable operation of the business. The course emphasizes the impact of technology on both the collection and use of information for managerial decisions. Prerequisite: BUS 703. LEC

BUS 731 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. Not open to students who have credit in BUS 510, BUS 610, BUS 740, or BUS 741. Prerequisite: BUS 703. LEC

BUS 732 Financial Statement Presentation and Analysis II (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. Not open to students who have credit in BUS 510, BUS 610, BUS 740, or BUS 741. Prerequisite: BUS 703. LEC

BUS 733 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: BUS 703 or equivalent. LEC

BUS 734 E-Commerce: An Integrative Perspective (3). This course examines how organizations and individuals exploit the Internet and other emerging information technology to conduct business in an information era. This course combines practice and theory to examine successes, failures, and common practices when using information technology for e-commerce activities. Prerequisite: BUS 706. LEC

BUS 735 Systems Analysis and Design (3). (S) There are four major phases in the life cycle of a computer-based information system: 1) Planning; 2) Analysis and Design; 3) Implementation; and 4) Operations and Maintenance. This course develops skills in the Analysis and Design phase and explains its relationships to the other three life-cycle phases. It emphasizes structured analysis and design techniques, including Data Flow Diagrams, Structure Charts, Entity-Relationship Diagrams, and the application of CASE (Computer-Aided Software Engineering) Tools. The teaching methods will combine classroom experience with an analysis and design project undertaken for a management user. Prerequisite: Undergraduate: BUS 605 or permission of instructor. Graduate: BUS 708. LEC

BUS 736 Strategic Information Systems Planning (3). (FS) This course examines the issues of using computers and technology to achieve a strategic and competitive advantage for a business. The topics covered in this course include an examination of the strategic planning process and different technologies that are used in businesses to achieve a strategic and competitive advantage such as robotics, expert systems, decision support systems, computer-aided design and manufacturing, and data base management systems. We will examine how organizations can take advantage of the opportunities presented by the technology. Hands-on experience will be obtained through cases, projects, and various software techniques. Prerequisite: BUS 605 or BUS 706. Enrollment restricted. LEC

BUS 737 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 practical projects. In addition, the course examines the software engineering issues involved in system development, including usability and design issues. To enhance the quality of this system developed, the course also looks into software testing and evaluation techniques. Prerequisite: BUS 706 or concurrent enrollment in BUS 706. LEC
BUS 738 Database Management (3). This course provides insight to the managerial and organizational issues that surround the development and implementation of database systems. Students will undertake a project that allows them to experience the database development process while learning and practicing the 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 will also study strategic issues that impact database development. Furthermore, students 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: BUS 706; BUS 737 or concurrent enrollment in BUS 737. LEC

BUS 739 Advanced Managerial Accounting: Quantitative and Economic Topics (3). (V) Through judicious use of qualitative 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: BUS 517. LEC

BUS 740 Accounting Theory (3). (S) The development of an understanding of accounting concepts and standards as a basis for the evaluation of current problems of reporting to stockholders, regulatory bodies, management, and other users of financial data. Topics will include accounting theory development, alternative valuation models, an introduction to market model research, the theory of accounting standard formulation, and human information processing of accounting data. Prerequisite: BUS 610. LEC

BUS 741 Advanced Accounting Problems (3). (S) Advanced problems in bankruptcy, estates and trusts, installment and consignment, sales, insurance settlements, consolidated statements and other areas of importance to the practice of public accounting. Prerequisite: Undergraduate: BUS 610 or permission of instructor. Requires senior standing and a 3.0 overall grade-point average. Graduate: BUS 732. Enrollment restricted. LEC

BUS 742 Applied Accounting Theory (3). (S) A study of the accounting standard-setting process and of the implications of those standards for the practicing accountant. Topics to be covered include the conceptual framework, the institutional environment, the rationale underlying specific standards, and major SEC issues. Prerequisite: BUS 610. LEC

BUS 743 Introduction to Auditing (3). (V) The fundamental concepts of audit risk, evidence accumulation and materiality are applied to financial statement audits using generally accepted accounting principles as the criterion. Audit objectives and procedures are studied in relation to the opinion which the auditor expresses on clients’ financial statements. Financial statement audits are compared with other types of engagements performed by public accountants, and they are also compared with other types of audits, such as, compliance and operational audits. Prerequisite: BUS 605 and BUS 610. LEC

BUS 744 Advanced Auditing (3). (V) Current auditing philosophy, standards, techniques, and professional judgment are extensively investigated and related to auditing activities. Special emphasis is given to the design of audit programs in relation to the client’s system of internal control and the effect of such factors as relative risk and materiality. Other topics include auditors’ legal liability, professional ethics, the impact of electronic data processing and statistical techniques, and the preparation of auditors’ reports and qualifications therein. Prerequisite: BUS 616 or BUS 743. LEC

BUS 745 Tax Research (3). (V) 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: BUS 608, BUS 609, or BUS 733, or consent of instructor. LEC

BUS 746 Taxation for Business Entities (4). (F) A study of federal income taxation for corporations, subchapter S corporations, and partnerships. The tax problems associated with formation, operation, distributions, redemptions, reorganizations, and selected special topics will be analyzed. Prerequisite: BUS 745 or concurrent enrollment. LEC

BUS 747 Tax Planning (3). A study of the fundamentals of Federal estate and gift taxation, the income taxation of estates and trusts, and the various aspects of family tax planning. The course will develop one’s ability to research and construct a comprehensive plan for a family’s tax needs. Prerequisite: BUS 609, BUS 620, or BUS 733, or consent of instructor. LEC

BUS 748 Business Computer Networking (3). This course exposes graduate business and finance students to the technical and managerial aspects of business networking. The course will provide students with a foundation in network theory and technology. Business network administration and operation will be a major component of the course. The course will use case studies and outside readings to focus on key network management issues and to present emerging network technologies. Prerequisite: BUS 706. LEC

BUS 749 Developments in Software Technology (3). This course is an introduction to object-oriented (OO) technology and the object paradigm. We will explore the object paradigm, its benefits and limitations. Specifically, we will study a state-of-art technique for OO modeling. We will 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 and design through projects with an OO programming language. Prerequisite: BUS 706; BUS 737. LEC

BUS 751 Investment Theory (2). (V) This course provides a framework for describing the nature of securities markets. This focus on efficient markets, capital markets, and portfolio theory. Through the use of theoretical models, students gain an understanding of the methods and techniques utilized by the professional investor and portfolio manager. Not open to students with credit in BUS 822. Prerequisite: BUS 709 or consent of instructor. LEC

BUS 752 Investment Analysis (2). (V) 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 BUS 822. Prerequisite: BUS 751 or consent of instructor. LEC

BUS 753 Analysis of Financial Intermediaries (2). (V) This course focuses on the principal elements of theoretical and practical controversies in the area of financial institutions. Contemporary issues facing these institutions in connection with historical and evolutionary developments are a hallmark of the course. Not open to students with credit in BUS 623. Prerequisite: BUS 709. LEC

BUS 755 Real Estate Investment Analysis (2). (V) 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: BUS 709. LEC

BUS 756 Financial Risk Management (2). This course examines the use of forwards, futures, options, and other financial derivatives for hedging, arbitrage, and speculative purposes. The course focuses on how firms can hedge interest rate risk, currency risk, commodity price risk using derivatives. The emphasis is on understanding the issues and techniques of financial engineering with derivatives as practiced by firms and individuals. Prerequisite: BUS 709 or consent of instructor. LEC

BUS 757 Business Valuation (3). This course applies financial valuation concepts to firms, divisions and product lines. Concepts explored in the course include free cash flow, economic value added, internal and external restructuring, and valuation. Prerequisite: BUS 750 or BUS 751, or BUS 754. LEC

BUS 758 Applied Portfolio Management (4). (V) This course provides the student with practical portfolio experience. Students actually and collectively manage funds in an endowment account for the benefit of the University and the School of Business. Experienced instructors, speakers, and financial analysts from Wall Street give the class a hands-on real life experience in analyzing and managing securities. The student will be familiarized with many different valuation procedures such as cash flows and growth models in an event driven context, as well as market capitalization techniques. Individual securities and stock options are analyzed on a continuing basis for inclusion or exclusion in the portfolio. Prerequisite: BUS 751 or equivalent, or consent of instructor. Enrollment restricted. LEC

BUS 759 International Finance (3). (V) 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 international nature of their environment. Topics can include split, 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: BUS 709 and BUS 707 or ECON 522 or ECON 523 or permission of instructor. LEC

BUS 760 Global Financial Risk Management I: 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: BUS 709. LEC

BUS 761 Global Financial Risk Management II: 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 in-
BUS 762 Business Investment (2). The focus of this course is on the evaluation of fixed asset investment opportunities. Important topics are: cash flow analysis, payback of required rates of return, risk analysis, and long-term investment analysis. Not open to students with credit in BUS 624. LEC

BUS 763 Business Financing (2). The focus of this course is on the theory and practice of how businesses raise funds. Important topics are: long-term capital markets and sources of long-term financing, capital structure, dividend policy, and a variety of long-term financing problems. Not open to students with credit in BUS 624. Prerequisite: BUS 762 or consent of instructor. LEC

BUS 765 New Product Management (3). (V) The 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 marketing opportunities, entry strategies, and developing the marketing mix for the new product. Prerequisite: BUS 710 or BUS 711 or permission of instructor. LEC

BUS 766 Consumer Behavior (3). (V) A course designed (1) to review behavioral science concepts applicable to understanding the buyer's behavior, (2) to investigate the specific processes of consumer decision-making and purchasing; and (3) to discuss the research applications of behavioral science concepts to marketing problems. Not open to students with credit in BUS 638. Prerequisite: BUS 710 or BUS 711. LEC

BUS 767 Marketing Research (3). (V) 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 sources, measurement and scaling, sampling, experimentation, and statistical analysis of data. Not open to students with credit in BUS 639. Prerequisite: BUS 710 or BUS 711. LEC

BUS 768 Marketing Communications (3). (S) This course investigates the marketing communications system primarily from a managerial perspective. The course operates from the premise that the development of any persuasive communications strategy is often the advertising mass communications or personal sales - is best accomplished after an understanding of the basic elements of communication and management. Consequently, a good part 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. Prerequisite: BUS 710 or BUS 711. LEC

BUS 769 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 marketing planning. Methods for the strategic analysis of business units, product-market definition, segmentation, 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 tools of the strategic planning framework which should enable participants to formulate alternative market 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. Prerequisite: BUS 710 or BUS 711. LEC

BUS 770 Metrics and Statistics in Marketing Research (3). (S) An analysis of selected statistical and mathematical techniques that are currently being applied or are potentially applicable to the solution of marketing problems. Extensive use is made of actual studies that have utilized these techniques. Prerequisite: BUS 639 or BUS 710 or BUS 711. LEC

BUS 771 Global Marketing (3). (V) 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 the study of competitive analysis and competitive strategy for the global markets, marketing information systems, various strategies for entering global markets, organization, planning and control of global marketing, and marketing mix decisions (product, price, promotion, and distribution) in a global setting. Prerequisite: BUS 710 or BUS 711 or consent of instructor. LEC

BUS 772 Sales Force Management (3). (V) 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, tools, and techniques required to effectively manage this important function. Since the use of personal selling is generally more pronounced in industrial markets, this course will first analyze issues unique to industrial marketing. Topics here include industrial buying behavior, segmentation strategies for industrial markets, life cycle strategies, 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 structuring the sales force, sizing the sales force, demand estimation, 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. LEC

BUS 780 Legal Aspects of Business Transactions: 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. Prerequisites: BUS 708, LEC

BUS 781 Legal Aspects of Business Organizations (3). A course focused on the legal attributes of different forms of business organizations, such as partnerships and corporations. This course includes a study of the basic principles of agency law. It explores the rights and responsibilities of people and organizations (as such as partners, stockholders, directors, officers, contractors, employers, and employees) functioning in the organizational environment. Also considered are the interests of third parties, including tort liability, which brings into play legal topics, such as securities regulations, ethics, and corporate social responsibility. Not open to students with credit in BUS 642. Prerequisite: BUS 708. LEC

BUS 782 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 BUS 644. Prerequisite: BUS 708. LEC

BUS 785 Management Seminar (3). (V) An introduction to the methodology of management science, namely model formulation, analysis, interpretation, and sensitivity analysis. Topics covered may include decision making under uncertainty, resource allocation models, and probabilistic models. Applications will be emphasized. Prerequisite: BUS 704. LEC

BUS 786 Business Forecasting Methods and Applications (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: BUS 706. LEC

BUS 787 Managing for Quality Improvement (3). (V) 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 foundations of total quality theory including Deming’s 14 principles of management and key tenants of Juran and Crosby. Additional topics include an examination of the continual improvement process in theory and action, strategies for getting started, and issues to address during a transformation into a total quality model of operation. Prerequisite: BUS 718 or BUS 719. LEC

BUS 788 Seminar in Decision Sciences: ______ (3). (V) 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, habitual domain theory for forming winning strategies and effective decision making. Automated aids for decision making such as expert systems may also be covered. Prerequisite: BUS 704 and BUS 718 or BUS 719, or consent of instructor. LEC

BUS 789 Statistical Quality Control (3). (V) This course deals with the understanding, control, and reduction of variation in manufacturing and service environments for the purpose of process improvement. The thinking needed to discover and eliminate root causes of variation will be discussed. Statistical tools that are useful in the discovery of root causes of variation will be covered. These tools include control charts, histograms, Pareto charts, flow charts, checksheets, scatter plots, and cause and effect diagrams. Particular emphasis will be given to methods for analyzing a process, to methods for the use of tools in a systematic way to stabilize an entire process, and to methods for reducing variability in an entire process. Prerequisite: BUS 704. LEC

BUS 790 Contemporary Issues in Operations Management (3). (V) This course will examine the major manufacturing and the operating strategies used by firms today. A partial list of these strategies include: quality improvement, theory of constraints, just-in-time, and manufacturing planning and control systems. Pros and cons of each strategy
BUS 803 Organizational Design (3). (V) This course examines the evolving concept of management and explores various theories and methods for managing organizations. This course has three purposes: (1) to provide access to important ideas and issues facing general managers who help the students integrate their knowledge and expand their vision about managing organizations, and (3) to provide a forum for discussion of the issues, challenges, and opportunities lying ahead in a career in management. Prerequisite: BUS 701 or equivalent for non-business majors. LEC

BUS 801 Organizational Change and Development (3). This course examines the mechanisms the organization uses to respond to and initiate changes in its 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: BUS 701. LEC

BUS 802 Organizational Problem Solving (3). (V) This course presents theories and methods for understanding and managing the processes of organizational problem solving. Organizational problem solving is viewed in terms of five interdependent stages: (1) problem finding, (2) problem formulation, (3) choosing among alternatives, (4) implementing the solution, and (5) audit and review of results. While the emphasis is on the substantive qualitative issues, there is coverage of some important topics in decision theory. Prerequisite: BUS 701 or equivalent for non-business majors. LEC

BUS 803 Organizational Design (3). (V) Organizations are viewed as interdependent with their changing environments. They struggle to achieve congruence among their strategic direction, their implementing organizational technologies, and their results. Organizations must also examine the bonding of their members with the organization and how achieving bonding both affects and is affected by the organizational design, rewards systems, and meeting customer requirements. This course surveys current issues in the theory and practice of organizational design and discusses, in depth, how to perform an organizational design. Prerequisite: BUS 701 or equivalent for non-business majors. LEC

BUS 804 Behavioral Research Methods (4). (S) This course is designed to develop in students an ability to analyze research reports critically and to provide skills in designing, performing, and reporting original behavioral research. Methodologies ranging from naturalistic field studies to laboratory experiments are reviewed along with various data collection strategies. Students prepare and defend an original research proposal. Recommended to be taken early in the program for Organization and Administration doctoral and masters students. LEC

BUS 805 Comparative and Cross Cultural Management (3). (V) The course focuses on differences and similarities in organizational behavior and in the values and norms of organization members from one society to another. A primary goal is to construct a model for understanding the complex linkage among the cultural, social, economic, and political variables that influence organizational behavior. The course also considers the problems and accommodations that occur when people of different national or cultural backgrounds work together, either within the boundaries of an organization or in business negotiations. The emphasis is on the necessary skills for managing multicultural diversity in both domestic and international settings. Major illustrations are drawn from countries and regions such as Japan, the People’s Republic of China, Europe, Latin America, the Middle East, and the United States. Prerequisite: BUS 701. LEC

BUS 806 Management of Workforce Diversity (3). (V) The focus of this course is on understanding the increasing diversity of the U.S. workforce and implications of that diversity for management. Theoretical and empirical research on workforce diversity will be considered and students will gain experience in understanding cultural differences through experiential exercises and visits to new environments. Topics covered include diversity in the United States, the changing composition of the workforce, the legal context of workforce diversity, cultural differences for major demographic groups, and strategies for effectively managing a diverse workforce. Prerequisite: BUS 701. LEC

BUS 807 Ethics, Values, and Success in Business (3). (V) The course will cover several different ethical frameworks useful in making business decisions and help students identify and articulate their own personal value systems and recognize them in the context of these ethical frameworks. It will develop their capacity for discovering the ethical dimension of business decisions and actions and provide opportunities to apply the skills and knowledge learned to business situations. The course uses readings, lecture, and discussions of basic moral philosophy, covering ethical frameworks including religious-based frameworks, utilitarianism, universalism, and distributive justice. Visits of media and guest lecturers from the business world will make occasional appearances. Students will be asked to interview business executives and report on those interviews. LEC

BUS 808 Advanced Topics in Management of Organizations (3). (V) This course is on understanding the basic concepts, practices, and issues involved in international business and economic relations. Emphasis is placed on the evolution of international monetary and trade systems, with emphasis on the role of the IMF and GATT (now the World Trade Organization); the nature and current transition of former centrally planned economies; the nature and prospects of less developed countries; and the interdependence of the major industrialized nations (with coverage also of regional integration initiatives). LEC

BUS 811 Competitive Analysis and Strategy (2). Competitive Analysis and Strategy 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, combining rigorous with relevance and applicability. Topics covered include market structure and competition, economic value creation, analysis of industries, customers and competitors, identification of capabilities and core competencies, alternative positioning strategies that create value in different environments and 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

BUS 812 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 advantages, both in terms of 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 cases to illustrate the key concepts. Topics covered include: Technological environment; Schumpeterian competition and creative destruction, innovation and diffusion; Industry evolution and market development triggered by technological developments; Technology-induced organizational changes: from craft production to mass customization; Technology strategy: acquisition, deployment, and utilization, new venture development. LEC

BUS 813 Management of Technology II: Technology and Operations (2). Management of Technology II focuses on the role of technology in 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 design, technology strategy: acquisition, deployment, and utilization, new venture development; IT and reengineering. LEC

BUS 814 International Business Strategy (2). International Business Strategy seeks to provide students with the skills, knowledge, and sensitivity required to successfully manage organizations and organizational units within a multinational environment. Topics covered include the analysis of industry and environmental forces, the competitive context in which companies operate in global industries, the characteristics of global, multi-domestic and transnational strategies, global strategic alliances, the role or organizational structures, and the importance of strategic control. 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

BUS 815 Strategy Implementation (2). The course will focus on the principles and methods of implementing strategies, both at the business unit and corporate levels. Environment, technology, and strategy will be discussed as the primary drivers of organization structure, processes, and systems. Cultural and development changes in processes and the realigning organization’s strategy structure, processes, and systems will be detailed. The role of the general manager as the architect of
Business Courses

change will be highlighted. Topics covered include: M-form organization, transaction costs, agency theory; behavior and output control; Co-ordination mechanisms; organization design, and reward systems; Organizational change, technological and human process change; Cultural change processes. LEC

BUS 816 Corporate Restructuring (2). This course will focus on causes, forms, and consequences of corporate restructuring. Four major forms of restructuring: ownership and corporate governance; fi-

nancial restructuring, reorientation of corporate business strategies, and IT driven reengineering will be discussed. The course will make extensive use of cases and readings. Topics covered include the market for corporate control, mergers and acquisitions, defensive and offensive strategies; ESOPs, leveraged buyouts and partnerships; Financial restructuring; bankruptcy; IPO, debt-equity swaps; Diversifica-
tion strategies; conglomerate, related and unrelated; business strategies, turnaround, downsizing, and laying; reengineering. LEC

BUS 817 Applied Strategic Management (2). Theories, concepts, and principles of Strategic Management will be applied to a specific in-
dustry or industries to enable better understanding of both the indus-
try(ies) and how strategies are developed and perform in that industry. Each student will research a firm in the industry with the objective of understanding the strategies and tactics of the firm. This course is designed around the life-cycle of a growth oriented firm, the emphasis is to learn and practice the skill sets common to business builders. Organiza-
tions will be critically examined. Discussion will focus on: enterprise; managing a diverse workforce; managing the "difficult" employee; and, disciplining and/or discharging employees. Prerequi-
tite: BUS 701 and BUS 706. LEC

BUS 830 Internal Labor Markets and Incentive Systems (2). This course analyzes human resource management practices within an eco-
nomic framework. This framework provides a basis for evaluating cur-
rent practices, new initiatives, and the coordination between resource policy and business strategy. The course will focus on the contribution of human capital to the value of the firm, and the role of incentive compensation in guiding individual actions. Topics that will be covered include: incentive systems, implicit contracts, performance measure-
ment, and the selection, training, and retention of human capital. Prerequi-
tite: BUS 702. LEC

BUS 831 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. Topics included are a systemic approach to human resource development, training needs as-
sessment, methods of training program development and evaluation, and implications for career development. The intent is to provide the student with a practical understanding of operational and strategic issues in human resource development. Prerequisite: BUS 706. LEC

BUS 832 Career Development and Management (2). This course in-
vestigates careers from individual and organizational perspectives with an emphasis on the implications of the current business environment. The organizational perspective includes career planning and pathing, the integration of career systems with other human resource pro-
grams, and the nature of the employee-employer relationship. The indi-
vidual perspective includes career management strategies and skills to cope in the workplace, career theories, and balancing work and non-
work. Prerequisite: BUS 705. LEC

BUS 833 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 app-
raisal information in both administrative decision making and em-
ployee coaching, counseling, and individual/team performance im-
provement. Prerequisite: BUS 705. LEC

BUS 834 International Human Resources Management (2). This course will focus on human resource strategies, practices, and institu-
tions in different countries, particularly Europe and the Pacific Rim. Human resources management and industrial relations will be placed in their political, social, and economic context. Firms strategy and prac-
tices overseas in response to the global market and other environmen-
tal forces will be contrasted with that of U.S. firms. Prerequisite: BUS 702. LEC

BUS 835 Labor Markets and Human Capital (2). This course will pro-
vide a basic understanding of the factors that determine the labor supply and demand and of the role of labor markets in determining wages and other employment conditions. In addition, it will introduce students to the principles underlying the concept of investment in human capital and other economic principles for guiding managerial strategic deci-
dions regarding human resources. Prerequisite: BUS 702. LEC

BUS 836 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

BUS 837 Managing Human Resources in a Union Environment (2). This course examines managing employees in the context of a labor union. The focus is on the creation and maintenance of 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. Top-
ics covered include strategies for dealing with unions, the negotiation of agreements, productivity enhancement, contract administration, and dispute resolution. LEC

BUS 838 Advanced Seminar in Human Resources: (2-5). A study of advanced topics in various subfields of Human Resources. The course focus, content, and approach will depend upon the particular topics to be covered. Repeatable for different topics. Prerequisite: To be determined by instructor. LEC

BUS 845 Global Business Environment (2). This course examines the global economic environment and international political economy in which modern enterprises operate. National economies from Europe, Pacific Rim, and Latin America will be selected for study with respect
to structure, performance and policy, and important political-economic interrelationships between countries examined. Implications will be derived for the management of modern firms. Prerequisite: BUS 707, LEC

BUS 846 Political Strategies for Managers (2). Managers act within the context of markets and "non-markets" that are composed of laws, regulations, and guidelines. This course first analyzes business strategies that effectively promote the firm's interests in the non-market sphere, and then applies this strategic framework in working through selected cases. Cases will involve both mature business regulation and emerging policy issues. The course will also examine media influences and political strategies applicable to international markets. Prerequisite: BUS 702 or consent of instructor. LEC

BUS 847 Public Policy toward Business (2). This course examines justifications for government intervention in the business practice of structure. The implications of various regulations are pursued, as well as those of deregulation. Topics such as environmental regulations, direct economic regulation of industries, antitrust law, subsidization of firms and industries, and privatization will be considered. Prerequisite: BUS 702 or consent of instructor. LEC

BUS 848 Negotiation and Dispute Resolution (3). This course will include a study of the theory and practice of negotiation and dispute resolution in business and other settings. The evolution of concepts will be promoted through role play simulations. LEC

BUS 849 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, bondholders, and stakeholders; vertical integration; the ownership chain or contract; M-form versus U-form of corporate hierarchy; and introduction to market-based management. Prerequisite: BUS 702 or ECON 520 or consent of instructor. LEC

BUS 850 Market-Based Management (3). This course demonstrates the practical use of economics as the overall framework for organizing economic activity within the firm. Market-Based Management is a management philosophy and methodology that uses the insights of free market economics to bring the power of free enterprise inside a business to discover, capture and use employee's local knowledge; to spur entrepreneurial zeal for wealth maximization; to allocate resources and decision rights to where they create the most wealth, and to provide value to customers. The Market-Based Management framework is presented in a traditional business paradigm of strategy, structure (or organizational design), and processes (or behavior). In the strategy area, MIB is influenced by Austrian economics and a dynamic view of market competition. With respect to organizational design and management processes, MIB is influenced by the powerful lessons of agency theory. Prerequisite: BUS 702 or ECON 520 or consent of instructor. LEC

BUS 895 Graduate Seminar in Business: (0.5-5). (V) A variable- topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

BUS 898 Special Problems in Business Administration (1-6). (V) Independent 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 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

BUS 899 Master's Thesis (3-6). (V) Individual research work. Approval of faculty supervisor required. RSH

BUS 901 Research Issues in Business Administration (2). (FS) A core course for Ph.D. students majoring in business administration. Provides a workshop format for discussion of the currently prevalent research methodologies and problems being addressed in the areas of accounting, finance, labor relations, marketing, operations research, and organization and administration. All Ph.D. students and faculty are encouraged to attend workshops of interest; however, each Ph.D. student must enroll in the course in each of the first four consecutive semesters in the program. Prerequisite: Admission to the Ph.D. program. LEC

BUS 902 Teaching Seminar (1). (F) The objective of this course is to improve the teaching effectiveness of the participants. Highly effective teachers demonstrate their 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

BUS 915 Seminar in Organization Behavior (4). (F) This course provides a critical analysis of the field of organizational behavior, with the individual as the unit of analysis, and is designed for doctoral students in business. The wide range of topics covered include work motivation, leadership, goal setting, and job design. Prerequisite: Doctoral standing or masters students and at least one undergraduate or M.B.A. level behavioral science course or consent of instructor. LEC

BUS 916 Seminar in Organization Theory (3). (S) This course provides an advanced survey of theories about organizations, their properties, and major processes. Topics include structures, structural change, organizational forms, decentralization, effectiveness, organization development and diffusion processes, concepts and theories of processes, interdependence and recent developments in organizational design and change. Major organization theories are also covered. Students are expected to write a serious research paper. This course is primarily for School of Business Ph.D. students but other advanced graduate students may enroll with the permission of the instructor. Prerequisite: Doctoral standing or masters students with at least one undergraduate or M.B.A. level behavioral science course or consent of instructor. LEC

BUS 917 Advanced Managerial Economics (3). (F) This course is designed primarily for doctoral candidates in business administration. It will provide a rigorous analytical approach to developing and understanding an integrated economic model of the business firm and its environment. The student will be expected to learn the theoretical foundations and how it can be applied to solve problems in business. Upon completion of the course the student should also possess an understanding of how economic analysis relates to and can be used in his/her field of research. Masters students may enroll with consent of instructor. LEC

BUS 918 Macroeconomics for Research in Business (3). (S) This course is designed primarily for doctoral candidates in business administration. The basic Classical and Keynesian macroeconomic models are explored, along with extensions of these models. Concentration is placed on the role of monetary, fiscal, and trade policies, and the dialogues concerning stabilization policies, unemployment-inflation tradeoff, wealth effects, rational expectations, and international policy issues. The focus is on a comparative static analysis of equilibrium, and the stability of equilibrium. Prerequisite: ECON 510 and MATH 115 and (MATH 116 or MATH 121), or consent of instructor. LEC

BUS 920 Probability for Business Research (4). (F) This course covers the basic theory of probability and its use for research in the business disciplines. The course is designed primarily for Ph.D. students in the business school. Prerequisite: Doctoral standing and two semesters of calculus, or consent of instructor. LEC

BUS 921 Statistics for Business Research (4). (S) This course covers the basic 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: BUS 920. LEC

BUS 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. Also discussed are 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 the use of assignments that require data analysis. Prerequisite: BUS 921 or consent of instructor. LEC

BUS 925 Seminar in Contemporary Accounting Theory II (3). (S) Continuation of BUS 740 with emphasis upon the economic and social factors affecting the development of accounting thought. Each student will make both oral and written presentations of his/her original investigation and analysis of contemporary controversial issues. Prerequisite: BUS 740 or consent of instructor. LEC

BUS 927 Seminar in Management Accounting (3). (V) The objective of this course is to foster a student's conception and resolution of substantive issues in the management accounting area. Thus, the course will provide exposure to selected contemporary research topics. Representative topics that will be discussed are: concept of information, information economics, accounting information for planning and control, design of accounting information systems, variance analysis, and cost allocations. Prerequisite: BUS 717 or BUS 741. LEC

BUS 928 Workshop in Accounting (2). (FS) Presentation and analysis of current research in accounting. Each student will be required to prepare and present one original paper to the workshop each year. Other papers will be presented to the workshop by other faculty from this institution and other institutions. Each student-in-residence will be required to analyze and discuss all of the papers presented to the workshop. Prerequisite: Two 700-level seminars in accounting. LEC

BUS 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

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
BUS 935 Seminar in Optimization: _____ (3). (V) This course will cover basic and advanced topics in optimization theory and applications. Examples of topics that may be covered are linear programming, nonlinear programming, dynamic programming, multiple-criteria decision making, habitual domain theory for forming winning strategies and effective decision making and game theory. Prerequisite: Linear algebra and real analysis or consent of instructor. LEC

BUS 936 Management Science Research Seminar (1). (FS) The seminar will discuss current research in management science topics such as artificial intelligence, statistics, optimization, decision making, decision support systems, and production/operations management. 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. LEC

BUS 937 Seminar in Business Finance (3). (S) 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: BUS 753 and BUS 752. LEC

BUS 938 Seminar in Investments (3). (F) 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: BUS 755. LEC

BUS 942 Human Resources Management Systems & Employee Development (4). (V) This seminar provides a rigorous review of the current theory and empirical research in selected areas of human resources management (e.g., staffing, training and development, compensation). Specific topics may include: job analysis, human resources planning, recruitment, selection, orientation, training, performance evaluation, compensation, career management, safety and health, and cost-benefit (utility) analysis of human resources programs. Emphasis on particular topics will vary. Prerequisite: Doctoral student standing or consent of instructor and knowledge generally acquired through the completion of the following basic courses or their equivalents: BUS 701, BUS 705, and BUS 704. LEC

BUS 943 Labor Markets and Labor Relations (4). (V) This seminar provides a rigorous review of the current body of theory and empirical research in labor economics and labor relations. Labor supply and demand, human capital, the economics of the firm human resource decisions including the incentive effects of compensation systems, the economics of unions and collective bargaining, and the legal environment of employment are among the topics covered. Emphasis on particular topics will vary. Prerequisite: BUS 917, BUS 920, and BUS 921, or equivalent courses, and doctoral student standing or consent of instructor. LEC

BUS 995 Doctoral Seminar in Business: _____ (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

BUS 997 Directed Research in Business Administration (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

BUS 998 Independent Study for Doctoral Students (1-5). (V) 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. Student must submit written statement of proposed project approved by supervising faculty member and Director, Doctoral Program prior to enrollment. Prerequisite: Approval required from supervising faculty member and Director, Doctoral Program. RSH

BUS 999 Doctoral Dissertation (1-12). (V) Individual research work. RSH

The following courses are cross-referenced as available to or recommended for students in Business:

EECS 663 Introduction to Communication Networks
HIST 651 History of American Business
PHIL 555 Justice and Economic Systems

● Business Law Courses

BLAW 500 Individual Research in Business Law (1-5).
BLAW 505 Legal Aspects of the Management Process (3).
BLAW 510 Legal Aspects of Real Property Transactions (3).
BLAW 515 Commercial Law (3).
BLAW 520 Negotiation and Conflict Resolution (3).

● Decision Sciences Course

DSCI 500 Individual Research in Decision Sciences (1-5).

● Finance Course

FIN 500 Individual Research in Finance (1-5).

● Information Systems Technology Course

IST 500 Individual Research in Information Systems Technology (1-5).

● International Business Course

IBUS 500 Individual Research in International Business (1-5).

● Management Course

MGMT 500 Individual Research in Management (1-5).

● Marketing Course

MKTG 500 Individual Research in Marketing (1-5).
School of Education

Admission ........................................................................ 101

Special Programs & Facilities ........................................ 101

Beach Center on Disability .............................................. 101
Center for Economic Education ..................................... 101
Center for Educational Testing & Evaluation .................. 101
Center for Psychoeducational Services ......................... 101
Center for Research on Learning ................................... 102
Elementary & Secondary Health & Physical Education Laboratory ........................................ 102
Exercise Physiology Laboratory & Fitness ............................ 102
   Evaluation Clinic ...................................................... 102
Kinesiology/Biomechanics Laboratory ............................. 102
Learning Resource & Technology Center ....................... 102
Microcomputer Laboratories ....................................... 102
South Central Regional Technology in Education Consortia ........................................ 102
   Special Education Clinical Programs ......................... 102
   Wellness Center ....................................................... 102

Program Areas ............................................................ 102

Master's Degree Programs ............................................. 103

Master of Arts .......................................................... 103
Master of Science ...................................................... 103

Specialist in Education .................................................. 103

Doctoral Degree Admission Policies ............................... 104

Doctor of Education ..................................................... 104
   Advisory Committee .................................................. 104
   Requirements ................................................................ 104
      1. Time Limit ........................................................... 104
      2. Period of Continuous Study .................................... 104
      3. Hours Beyond Master's Degree ............................... 105
      4. Core Requirement .................................................. 105
      5. Research Skills ...................................................... 105
      6. Doctoral Practicum Enrollment ............................... 105
      7. Comprehensive Examination ................................. 105
      8. Dissertation Committee & Proposal ....................... 106
      9. Continuous Enrollment ......................................... 106
     10. Dissertation ........................................................ 106
     11. Final Oral Examination ......................................... 106
     12. Dissertation Copies ............................................. 107

Ph.D. with a Major in Education ..................................... 107
   Advisory Committee .................................................. 107
   Requirements ................................................................ 107
      1. Time Limit ........................................................... 107
      2. Resident Study ...................................................... 107
      3. Program Area ....................................................... 107
      4. Core Requirement .................................................. 108
      5. Teaching Experience ............................................. 108
      6. Research Skills ...................................................... 108
      7. Comprehensive Examination ............................... 108
      8. Dissertation Committee & Proposal ....................... 109
      9. Continuous Enrollment ......................................... 109
     10. Dissertation ........................................................ 109
     11. Final Oral Examination ......................................... 109
     12. Dissertation Copies ............................................. 109

Ph.D. & Ed.D. Cooperative Transfer Programs .................. 110

Licenses: Added Endorsements ..................................... 110

Health, Sport, & Exercise Sciences ................................ 110
   Master of Science in Education Program ...................... 110
   Doctoral Degree Programs ......................................... 110
   Research Skills ......................................................... 110
   Laboratories & Facilities ........................................... 110
   Health, Sport, & Exercise Sciences Courses .................. 110

Psychology & Research in Education ............................. 114
   Counseling Psychology Programs ............................... 114
      Admission .............................................................. 114
      Program Requirements ............................................ 114
      Ph.D. in Counseling Psychology ............................... 115
         Prerequisites ......................................................... 115
         Admission ........................................................... 115
         Review of Graduate Status .................................... 115
         Course Work Requirements ................................. 115
         Comprehensive Examination ............................... 116
         Internship .......................................................... 116
         Dissertation ........................................................ 116
      Educational Psychology & Research Programs ........... 116
         Admission .......................................................... 116
      M.S.Ed. in Educational Psychology & Research .......... 116
         Program Requirements ......................................... 116
      Ph.D. in Educational Psychology & Research ............ 116
         Research Skills ...................................................... 117
         Comprehensive Examination ............................... 117
         Internship .......................................................... 118
         Dissertation ........................................................ 118
      M.S. in Counseling Psychology ................................. 117
         Admission ........................................................... 117
      Ed.S. in School Psychology ....................................... 117
         Program Requirements ......................................... 117
      Ph.D. in School Psychology ...................................... 117
         Research Skills ...................................................... 117
         Comprehensive Examination ............................... 118
         Internship .......................................................... 118
         Dissertation ........................................................ 118
      M.Ed. in School Psychology ..................................... 119
         Program Requirements ......................................... 119
      Internship ............................................................ 119
      Comprehensive Examination ............................... 119
      Course Work Requirements ...................................... 119
      School Psychology Program .................................... 120
      Admission ........................................................... 120
      Counseling Psychology Programs ......................... 121
      Admission ........................................................... 121
      Prerequisites ........................................................ 121
      Course Work Requirements ...................................... 121
      M.S. in Counseling Psychology ................................ 121
      Counseling Psychology Program ......................... 122
      Admission ........................................................... 122
      Prerequisites ........................................................ 122
      Course Work Requirements ...................................... 122
      Teaching & Leadership Programs .............................. 125
      Admission ........................................................... 125
      Doctoral Programs ................................................. 125
      Doctoral Degrees .................................................. 125
      Doctor of Education .............................................. 125
      Doctor of Philosophy ............................................ 125
      Special Education Courses ...................................... 125
      Special Education ................................................ 122
      M.S. in Education Degree ....................................... 122
      Doctoral Degrees .................................................. 123
      Doctor of Education .............................................. 123
      Doctor of Philosophy ............................................ 123
      Special Education Courses ...................................... 123
      Educational Administration .................................... 127
      Master's Degree Programs in EPL ......................... 127
      Doctoral Programs in EPL ....................................... 127
      Educational Administration .................................... 127
      Foundations of Education ....................................... 127
      Higher Education ................................................. 127
      Teaching & Leadership Courses .............................. 128

Angela Lumpkin, Dean
J.R. Pearson Hall, 1122 W. Campus Rd., Room 214K
Lawrence, KS 66045-3101, (785) 864-4297
Admission

Graduate programs in education are open to students with acceptable baccalaureate degrees, as specified by the admitting departments, with academic records indicating that applicants can do successful work at the graduate level. Regular admission requires a grade-point average of at least 3.0 on a 4.0 scale; probationary admission requires a grade-point average of at least 2.75. Individual departments may require additional information and may have more stringent admission and retention requirements. Special provisional admission categories are available to students who may not qualify under traditional admission criteria but can provide evidence of ability to work successfully at the graduate level, including experience in and commitment to the profession. Exceptions to established policies must be sought individually by petition to the Graduate Division of the School of Education.

Applications for admission to the Graduate School may be obtained from the School of Education Graduate Division Office, Joseph R. Pearson Hall, 1122 West Campus Rd., Room 208, Lawrence, KS 66045-3101, or from departments or the Graduate School, or online at www.graduate.ku.edu. Submit applications to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

The application should be accompanied by two official transcripts of all college records, other materials specified by the department, and an application fee:

- Domestic students applying online ........................................... $45
- Domestic students applying on paper ........................................ $55
- International students applying online .................................... $65
- International students applying on paper ................................ $69

Please send a nonrefundable check or money order payable to the University of Kansas.

Ordinarily, complete application materials should be received by July 1 for fall admission, December 1 for the spring semester, and May 1 for the summer session. Prospective students should contact their departments for admission deadlines.

Note: The School of Education is considering changes to its graduate studies requirements and expectations. Degree requirements may have changed. Prospective and current students should obtain current degree requirements from their departments.

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.

Beach Center on Disability

The Beach Center, Haworth Hall, 1200 Sunnyside Ave., Room 3111, Lawrence, KS 66045-7534, 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 for Economic Education, 331 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 for Educational Testing and Evaluation, 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, personnel/student evaluation, and policy implications of educational testing and assessment. There are opportunities for assistantships for interested and qualified students.

Center for Psychoeducational Services

The center, 130 Joseph R. Pearson Hall, is a training site for students in the Departments of Psychology and Research in Education, Special Education, and Teach-
Special Programs & Facilities; Program Areas

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.

See Research and Academic Support, pages 43 to 54, for descriptions of research units at KU.

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-compatible 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 West Campus Rd., 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, human development, social work, speech, music therapy, occupational therapy, and physical therapy offer a rich multidisciplinary opportunity for special education and other students.

Wellness Center

The Wellness Center, Robinson Center, 1301 Sunnyside Ave., Room 138, Lawrence, KS 66045-7567, provides a field setting for health education and physical education students to gain experience with the clinical aspects of personal wellness. The center addresses management of stress, drugs, personal habits, and nutrition. With the fitness clinic, it provides physical function profiles and measures of body composition. Individuals are evaluated to determine present status. In a personal interview, the center then suggests strategies for intervention. It provides the background information necessary to adjust one’s lifestyle to reduce health risks and to enhance health.

Program Areas

To facilitate preparation for specific types of professional service and teaching, graduate study in education has been organized into the program areas encompassed by the four departments of the school:

- Teaching and Leadership includes programs in Curriculum and Instruction (including the fields relating to elementary and secondary education) and Educational Policy and Leadership (comprising the program...
areas of educational administration, foundations, and higher education).
• Psychology and Research in Education offers programs in Counseling Psychology and Educational Psychology and Research (including school psychology as an interdepartmental program with special education and early childhood education as an interdepartmental program with teaching and leadership).
• Health, Sport, and Exercise Sciences offers various areas of study including exercise science, health science, pedagogy, and sports studies.
• Special Education conducts graduate degree programs on the Lawrence campus and selected programs on the KU Edwards Campus in Overland Park.

Further information on graduate study may be found in departmental sections of this catalog. For information about programs in visual arts education, music education, and music therapy, see the School of Fine Arts 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 involved. 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.

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. All master’s programs require a graduate class in research and evaluation methods (e.g., PRE 715), 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.

Note: Because substantive and procedural differences exist among the program areas, 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.

Note: To be eligible for degree conferral, the student must deposit unbound thesis copies for the thesis option and complete all other requirements before the due date for submission of degree candidate grades. The Graduate School establishes and announces deadlines each year.

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 elected 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 (1) an approved research course and (2) Master’s Project (a total of 6 hours in the research course and Master’s Project applicable to degree requirements). While enrolled in the latter, the candidate submits a research paper related to the teaching area to the advisor. 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 selects one of the program areas as a concentration for graduate study. A minimum of 30 credit hours is required for this degree, 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 (1) an approved research course and (2) Master’s Project (a total of 6 hours in the research course and Master’s Project applicable to degree requirements). While enrolled in the latter, 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 degree of Specialist in Education in School Psychology in the Department of Psychology and Research in Education may be earned on the basis of two years of graduate work (67 credit hours*), subject to the following conditions:

* A student without a degree in education also must complete 6 hours of specified course work in curriculum and history/philosophy of education.

1. Applicants must meet the admission criteria for this degree as described under Admission in School of Education program descriptions in this chapter.
2. Admission requires submission of transcripts, Graduate Record Examination scores, a letter of intent, and three letters of recommendation to the University of Kansas Graduate School, Graduate Applications, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535.
3. An approved program of study must be filed in the Office of Graduate Records during the first semester of work toward the degree.
The 2004 edition of U.S. News America's Best Graduate Schools ranks KU's School of Education 25th in the nation among public universities.


4. The student must spend at least one semester or two summer sessions in residence and complete at least 12 hours of graduate work during that time.
5. The student must pass a final examination at least four weeks before the degree is granted.
6. The student must complete 4 hours of PRE 947 Specialist Research.
7. Requirements for the Ed.S. degree must be completed in six years. For compelling reasons and on the recommendation of the School Psychology Coordinating Committee, the student may petition the Graduate Division for an extension to the time limit.

Doctoral Degree Admission Policies

The application for admission to the Graduate School 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) official 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 resume of professional experience, and (6) scores from the verbal, quantitative and analytical 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 completion of 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 three general tests 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. Full-time graduate student enrollment in the School of Education is 9 graduate credit hours or the equivalent.

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 the following program areas: curriculum and instruction; educational administration; health, sport, and exercise sciences; higher education; and special education.

Advisory Committee

A student admitted to the Graduate School 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 those of the Graduate School and the School of Education stated below.

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 doctoral 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 thereeto. 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. Graduate School policy requires a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the various program areas, some may have more stringent policies regarding 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 or at most two years, with the possibility of extension on request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and, in order to continue, must apply for readmission to the program and to the Graduate Division.

2. Period of Continuous Study. The student must spend the equivalent of three academic years, including the time spent in 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.

(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 in 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 core 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. It is not merely a requirement measured in hours of enrollment or of credit in courses toward the degree. 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 stated 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 of study. The concentration must contain a minimum of 40 semester hours of appropriate and related course work and may include appropriate work taken for the master’s degree or its equivalent. 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 during the first doctoral enrollment. The course 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 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 a Doctoral Program Approval 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 should be taken during an established one-week period near the midpoint of each semester and early in the summer session. The dates for each academic year are available from the Graduate Division Office early in the spring semester. The student must be enrolled when the examination is taken.
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 School 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 need 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 is to 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, is to be submitted (with a Do-all form) to the School of Education Graduate Division Office for deposit in the reserve section of the Learning Resources Center.

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 the Graduate School.

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 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 for 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 is to 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 by the Graduate School. 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 the Graduate School.
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. If the candidate fails the final oral examination, she or he 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, two unbound copies are to be deposited at the School of Education Graduate Division Office by the deadline set by the Graduate School. In addition, the candidate must:

(a) Submit to the School of Education Graduate Division Office an abstract of the dissertation (no more than 350 words) to be published in “Dissertation Abstracts.” A basic charge is made for this service, as it is for dissertation binding. Further instructions are available in the Graduate Division Office.
(b) Make arrangements with the Graduate School office to have the dissertation microfilmed or meet one of the publication options offered by the Graduate School.

Note: To be eligible for a degree, the student must complete all requirements, including depositing unbound dissertation copies. The Graduate School establishes and announces exact deadlines each year.

**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 program areas.

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 the Graduate School 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 those of the Graduate School and the School of Education stated below.

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 doctoral 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 thereof. 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. Graduate School policy requires a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the program areas, some may have more stringent policies about 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 or at most two years, with the possibility of extension upon request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and, in order 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 the Graduate School does not prescribe 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 minimum. 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
In 1909, the education program at KU was reorganized as the School of Education.

The Center for Psychoeducational Services is staffed by student clinicians in school psychology, counseling psychology, reading, special education, and other fields who earn credit while they gain practical experience working directly with clients.

Doctor of Philosophy with a Major in Education

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 assistance 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. The residence 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.

The core requirement should be completed before the comprehensive examination is scheduled or by the end of the semester in which the comprehensive examination 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 Graduate School 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 area: 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 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 of this catalog.

7. Comprehensive Examination. When a Ph.D. aspirant has completed the major portion of the course work at a level satisfactory to the department to which the work is done and to the Graduate School 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 of the comprehensive examination must be taken during an established one-week period near the midpoint of each semester and early in the summer session. Exact dates for the ensuing 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 the Graduate School.

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 need be repeated, after the minimal 90-day interim period.

8. Dissertation Committee and Proposal. Doctoral aspirants may begin work on the dissertation upon completion of 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 Ph.D. The Graduate Division, using the recommendations of the candidate’s department, designates the dissertation committee at this time. The dissertation 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 a Do-all form) to the School of Education Graduate Division Office for subsequent deposit in the reserve section of the Curriculum Laboratory.

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 minimal 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 by the Graduate Division. At least one member must be from a department other than the candidate’s major department. This member represents the Graduate School. 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 by the Graduate School. 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 final examination must be partly oral and may be wholly so. The examination covers the dissertation and the candidate’s concentration and minor area. The candidate passes the final examination if a majority of the official examining committee members (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, two unbound copies are to be deposited at the School of Education Graduate Division Office by the deadline set by the Graduate School. In addition, the candidate must

(a) Submit to the School of Education Graduate Division Office an abstract of the dissertation (no more than 350 words) to be published in “Dissertation Abstracts.” A basic charge is made for this service, as it is for dissertation binding. Further instructions are available in the Graduate Division Office.
Ph.D. and Ed.D. Cooperative Transfer Programs

Cooperative transfer programs leading to the doctorate from the University of Kansas are available in conjunction with Emporia State University and Pittsburg State University in educational administration and higher education. Qualified students are advised by a faculty committee representing both campuses and may complete about half their course work and residence at Emporia State University or Pittsburg State University before transfer to KU. Additional cooperative transfer programs may be developed in the future. Further information is available from the appropriate departments in any of the cooperating schools.

Licensure: Added Endorsements

At least 8 hours of the required course work must be completed at KU if it is to be the recommending institution for adding endorsements to the teaching license. For specific information about adding endorsements, contact the School of Education at (785) 864-3726.

Health, Sport, and Exercise Sciences

Chair: L. Keith Tennant

Graduate Coordinator: James D. LaPoint
Robinson Center, 1301 Sunnyside Ave., Room 104
Lawrence, KS 66045-7567, (785) 864-3371
www.soe.ku.edu/hses

Professors: Donnelly, Lumpkin, Tennant
Professors Emeriti: Osness, Zebas
Associate Professors: Greene, King, LaPoint
Associate Professor Emeritus: Huntsinger

Assistant Professors: Akagi, Frederick, Godard, Gregory

Graduate work in health, sport, and exercise science includes an offering of courses leading to the Master of Science in Education (M.S.Ed.), the Doctor of Education (Ed.D.), and the Doctor of Philosophy (Ph.D.) 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 the Graduate School through the Graduate Division of the School of Education.

Note: The department is considering changes to its graduate studies requirements and expectations. Degree requirements may have changed. Prospective and current students should obtain the current degree requirements from the department.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535
HSES 558 Creative Movement and Dance Appreciation (3).

HSES 565 Methods and Materials in Health Education (3).

HSES 573 Introduction to School and Community Health (3).

HSES 580 Internship in: _- _- _- (2-16).


HSES 582 Athletic Training Practicum II: Management and Treatment (4).

HSES 583 Athletic Training Practicum III: Rehabilitation (4).

HSES 584 Athletic Training Practicum IV: Senior Sport Experience (4).

HSES 598 Special Course: _- (1-5).

HSES 605 Administering Health Related Programs (3).

HSES 608 Pool and Spa Management (3).

HSES 618 Health Aspects of Aging (3).

HSES 620 Consumer Health (3).

HSES 625 Marketing Sports and Fitness Programs (3).

HSES 630 Sport Law (3).

HSES 640 Psychology of Coaching (2).

HSES 649 Environmental Health (3).

HSES 654 Management and Treatment Techniques of Athletic Training (3).

HSES 656 Rehabilitation Techniques of Athletic Training (3).

HSES 657 Organization and Administration Techniques of Athletic Training (2).

HSES 670 Introduction to Biomechanics (3).

HSES 672 Exercise Physiology (3).

HSES 673 Clinical Fitness Evaluation Techniques (3).

HSES 675 Administration of Health, Physical Education, and Sport Studies (3).

HSES 678 Introduction to Energy Balance and Weight Management (3).

HSES 680 Adaptive Physical Education and Recreation (3).

HSES 690 Sociology of Sport (3).

HSES 704 Principles of Physical Education (2). A study of the contemporary philosophies of physical education and the application of these philosophies in the formulation of underlying principles used by the teacher or administrator in the development of the physical education program. Prerequisite: Ten hours of Health, Sport, and Exercise Sciences. LEC

HSES 707 Educational Conference in: _- _- _- (1-3). Developed to cover educational conferences and workshops. Prerequisite: Sixty hours of college work. LEC

HSES 713 AIDS and STD’s: Facts of Life (3). This course is designed to inform students that acquired immune deficiency syndrome and other sexually transmitted diseases are indeed, facts of life. Some of the facts that will be presented include: the diseases that are in epidemic proportions, the diseases that are incurable, and most importantly, the techniques for preventing the spread of AIDS and STD’s. The course will explore current issues with regard to a number of sexually transmitted diseases, but the majority of the course will be devoted to acquired immune deficiency syndrome. In the study of AIDS, students will learn about the sociological, physiological, economic, spiritual, and legal ramifications that are raised by the various issues. There will be an in-depth study of the AIDS virus and its action at the cell level. The course will conclude with educational implications including a study of the: state mandate for AIDS and Sexuality Education, curriculum development, teaching techniques, and policy making procedures. Prerequisite: A course in sexuality or permission of instructor. LEC

HSES 714 Motor Development During Growth (3). Motor development in childhood and adolescence and its relationship to physical growth. Factors influencing motor learning and development will be explored. This course provides basic understanding of the neuromuscular changes and abilities of children and adolescents. Prerequisite: A course in kinesiology and anatomy. LEC

HSES 719 Tests and Measurements in Physical Education (3). A study of motor testing including tests, procedures, and analysis and interpretation of results. Areas to be included are sports skills, fitness, motor ability, perceptual-motor and anthropometric, actual practice with tests and their administration is provided. Prerequisite: Ten hours of Health, Sport, and Exercise Sciences. LEC

HSES 720 Financing and Marketing Leisure Services (3). Financing and Marketing Leisure Services examines the funding and marketing of leisure service agencies. This is done through examination of current legislation involving tax laws, lobbying efforts of professional organizations, and the application of current technology. Strategies for cutback management, economic analyses, funding sources, and contract services are a few of the selected topics. Prerequisite: Six hours of approved recreation course work or consent of instructor. LEC

HSES 730 Advanced Concepts in Nutrition (3). A study of the nutritional factors that affect health at all ages. Specific nutritional needs and effects of deficiency states on health will also be addressed. The course will also include the physiological and biochemical mechanisms involved in the use of nutrients for human growth and development as well as the production of energy through the metabolic process. Prerequisite: HSES 550 or equivalent experience and permission of instructor. LEC

HSES 732 Applied Nutrition Laboratory (2-4). This course will include the study of the principles of planning programs of food experiences and development of research techniques for measuring the effectiveness of such programs. Prerequisite: HSES 730. LAB

HSES 743 Management of Recreation Areas and Facilities (3). The course is an in-depth examination of various theories and techniques in managing areas and facilities that constitute the responsibilities of the recreation administrator. Special attention is given to the development of maintenance schedules, theories and concepts of preventive maintenance, management responsibilities for parks, for community buildings, for multipurpose centers, for golf courses, and other outdoor recreation facilities. Prerequisite: A course in recreation administration or planning health, physical education and recreation facilities. LEC

HSES 755 Physical Education for Mentally Retarded Populations (2). A study of physical characteristics, limitations, and movement potential of profoundly, trainable, and educable mental retardates. Emphasis is placed on techniques of evaluating motor performance, analyzing and sequencing motor activities, alternative methods of teaching retarded individuals, and curriculum development. LEC

HSES 760 Perceptual Motor Dysfunction (2). A study of incidence, classifications, and etiology of perceptual-motor dysfunction in children. Content emphasizes contemporary perceptual-motor theories, methods, and materials available for remedial programs. LEC

HSES 769 Clinical Treatment of Perceptual Motor Dysfunction Cases (1-3). Clinical work with children who are classified as complex perceptual-motor dysfunction cases. Instruction and practice with techniques of remediation will be provided. Prerequisite: Consent of instructor. FLD

HSES 770 Practicum in Motor Development of Exceptional Children (1-3). Supervised practice in the evaluation and teaching of motor skills for exceptional children. Prerequisite: A course in adaptive physical education or concurrent enrollment in such a course. FLD

HSES 771 Practicum in Exercise Science (3). This course will provide practical experiences in clinical and basic exercise sciences. Students will be assigned to a faculty mentor who will provide experience for the student in ongoing clinical programs or research projects. The priority outcome will be the acquisition of performance skills necessary in either clinical or basic exercise science. Prerequisite: Six hours of graduate courses in HSES, or equivalent, or consent of instructor. LEC

HSES 772 Practicum in Human Motion Analysis (1-3). This course is designed to provide practical experiences in laboratory techniques for the assessment of efficiency in human movement patterns. Areas typically studied in the laboratory are the assessment of skill technique in specific populations, gait analysis, flexibility, muscle strength and muscle power, posture, and athletic injuries. Students will become familiar with the instrumentation and the interpretation of data in human motion analysis. Prerequisite: A course in kinesiology or biomechanics and permission of instructor. LAB

HSES 774 Practicum in Stress Physiology (1-3). Practical experience in laboratory techniques for stress physiology research. Topics relate to specific interest areas of the student. Examples of such areas include electrocardiography, percent body fat, stress testing, specific populations, maximal testing, blood chemistry, stress reduction. Students will have the opportunity to use specific physiological instruments in assessing human performance under physical and/or emotional stress. Prerequisite: A course in physiology or consent of instructor. LAB

HSES 775 Health Planning and Assessment (3). This course is designed to provide students with the essential knowledge and skills required for the effective management of health-related programs and facilities. Specific areas to be included are: the effectiveness of current educational approaches to health promotion and health education; health hazard appraisals and risk reduction projects; the use of computers in health assessment; the development of inventories for determination of health needs; the development of appropriate budgets and the presentation of funding applications; and basic evaluation and accountability in health planning. Prerequisite: Six credit hours of community or school health education. LEC

HSES 777 Practicum in Individual Health and Wellness (1-3). This course is designed to provide practical experiences in the assessment of individual health problems and the implementation of appropriate prevention/intervention strategies. Areas which are typically studied in the laboratory include: diet/nutritional analysis, stress assessment, health hazard appraisals, consumer problems/issues/information, alcohol and drug interventions and the design of programs to aid in improvements of individual well-being. Students will become
Health, Sport, & Exercise Sciences

familiar with those instruments as necessary to analyze potential risk factors as they relate to personal health. Prerequisite: Permission of instructor. LEC

HSES 778 Respiratory Physiology (3). Structure, function, and regulation of respiratory systems of birds and mammals. Lectures will discuss the mechanics of respiration, chemical and neural control of breathing, pulmonary blood flow, and the transport of oxygen and carbon dioxide in the blood. The student will respond to the respiratory system. LEC

HSES 779 Physiology of Functional Aging (3). The course has been designed to address issues and concepts related to the biological aging process as a foundation for physical performance, general fitness, and health status. The biological concepts are applied to the human physiological aging process and the systems involved as well as the possible interventions that may affect that process. The several theories associated with physiological aging are also addressed as related to the physiological systems and current research findings may impact the understanding of these theories. Prerequisite: A course in basic biology. LEC

School of Education degree requirements are subject to change.

Current requirements are available from department offices.

The swimming pools, training rooms, saunas, and gymnasia at Robinson Health and Physical Education Center are open to the public on a limited basis. Call (785) 864-3491.

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 education as an academic discipline. Specific topics include: history of the profession, theories of health behavior and behavior change, principles of learning applied to health communications, health promotion practices, professional preparation, 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 exploring current trends and processes in health and physical education - primarily for undergraduates. LEC

HSES 800 Applied Movement Analysis (3). A course designed to observe, evaluate, and diagnose movement with culminating intervention strategies for improving performance. Prerequisite: A course in anatomy/biomechanics, or consent of instructor. LEC

HSES 801 Facilities for Physical Education, Exercise, and Sport (3). A study of current developments and trends in composition, structure, and design of physical education, athletic, and recreational facilities and equipment. Prerequisite: Admission to graduate school. A course in administration/management of Physical Education, Sport, Facilities Management, Recreation, or consent of instructor. LEC

HSES 802 Injury Prevention in Exercise and Sport (3). A course designed to examine the causes and prevention of sport and exercise related injuries. Students will investigate the anatomical and biomechanical principles underlying the causes in sport and exercise injuries and develop intervention strategies for preventing injuries from occurring. Prerequisite: A course in anatomy/biomechanics, or consent of instructor. LEC

HSES 803 Comparative Physical Education (3). A comparison of physical education and sports programs around the world. Emphasis on historical background, educational philosophy, teacher preparation, administration, programs and facilities 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 attention will be paid to the influence of exercise on behavioral manifestations such as state anxiety, depression, and aggression. Reference will be made to the athlete of all ages, 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 of kinesiology, circulation, metabolism, strength and muscular function, cardiac function, and body composition. Special emphasis will be placed on laboratory techniques of assessing physical fitness. Prerequisite: A course in exercise physiology. LAB

HSES 806 Stress Management (3). The long range objectives of this course are to assist students in gaining stress management knowledge; to help them to formulate improved perspectives on various stress management techniques; and consequently apply the developing constructs in their lives with a sense of purpose and self-representivity. Prerequisite: Two courses in health education or consent of instructor. LEC

HSES 807 Current Literature in Exercise Physiology (3). A wide range of topics from the exercise physiology literature will be discussed. Instructor and students will present reports to the group centered on current research findings with discussion aimed at application of these results to physical exercise and training. Prerequisite: A basic course in exercise physiology or consent of instructor. LEC

HSES 808 Biomechanics of Human Movement (3). A quantitative approach to the study of human movement based upon biomechanical principles. Topics to be covered include the kinematics and kinetics of human motion, muscle and connective tissue mechanics, and the practical application of concepts in the analysis of human movement efficiency. Prerequisite: A course in human anatomy, kinesiology, or biomechanics. LEC

HSES 809 Laboratory Experiences in Biomechanics (3). A course designed to provide “hands-on” experience with biomechanical tools for research such as film analysis, force place analysis, computers, and computer software. Prerequisite: One course in kinesiology. LAB

HSES 810 Advanced Exercise Physiology (3). An advanced study of the physiological and biomechanical aspects of muscular, cardiovascular, and respiratory function as the human is engaging in exercise. The topics of energy metabolism, hormones, and nutrition as related to exercise also are presented. Prerequisite: A basic course in exercise physiology. LEC

HSES 811 Current Research Literature in Leisure Behavior (3). This course is designed to analyze critically the research literature in the area of leisure behavior. Students will review research projects collectively as well as branching individually into special interest areas. Prerequisite: Six hours of approved recreation course work or consent of instructor. LEC

HSES 812 Current Issues in Health Education (3). This course is designed to analyze critically the literature in health education. The range of topics for discussion will vary from literature in popular readings to scientific reports in various journals. 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 conducted in a manner that will allow the students to report, discuss, and interact with each other concerning contemporary issues and future needs in the field. Prerequisite: A course in methods and materials in health education. 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 include: the concepts of health, principles of curriculum development, content selection, organization of the health program, current issues, actual practices, teaching in controversial areas, the implementation of effective health instruction, and legislation. Prerequisite: A course in methods and materials in health education. LEC

HSES 815 Assessing Motor Development of Exceptional Children (3). Standardized motor assessment instruments appropriate for use with exceptional children with motor problems will be critiqued. A battery of tests to measure specific abilities of school age young persons will be selected, administered to exceptional children, and the results interpreted. Prerequisite: Courses in educational measurements and motor development of the exceptional child. LEC

HSES 816 Health Education for the School Nurse (3). A course especially designed 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 needs, interest, and comprehensive abilities of school age young persons will be considered with regard to personal fitness, nutrition, chemical substance use, misuse and abuse, communicable disease control and peer relationships. FLD

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 information presented in this course by achieving satisfactory evaluations of presentations, papers, and an examination of the following topics: energy metabolism, general adaptations of aerobic and resistance training, exercise techniques for aerobic and resistance training, periodization of training, testing and evaluation of aerobic and resistance training performance, and exercise prescription for aerobic and resistance training. Prerequisite: 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 various legal issues which affect health educators and their audiences. Specifically, this course will survey federal, state, and local public health laws and regulations which may proscribe health educators’ actions. Legislation will be analyzed and the practical impact of the health educator upon the legislative process will be emphasized. Prerequisite: A course in community health or consent of instructor. LEC
HSES 819 Clinical Evaluation, Exercise Prescription, and Electrocardiography (3). This course is designed to review clinical evaluation techniques including diagnostic exercise tests and the physiologic changes that relate to certain kinds of pathology. It will also address individualized exercise prescription and the various methods used to prepare the exercise prescription for given populations. The components of this exercise prescription will be discussed in detail and applied to exercise intervention strategies. The fundamentals of data collection using the electrocardiogram and the fundamentals of electrocardiogram analysis will be studied during rest conditions and during exercise conditions. The course will apply physiological principles 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 kinesiological/biomechanical literature in such areas as skill techniques, equipment design, sport safety, and research tools and techniques. Readings will be critiqued and discussed. Emphasis will be given to the implications of research findings 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 related 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 on critique, and writing of original research in Health, Sport, and Exercise Sciences. LEC

HSES 823 Behavioral Strategies for Modifying Physical Activity (3). This course will examine the behavioral strategies that may influence physical activity participation and adherence across the lifespan (e.g., children, adults, older adults). This will include considerations of barriers that individuals are confronted with that prohibit or limit their physical activity. In addition, this course will examine the behavioral strategies that have been demonstrated to be effective in increasing adherence to physical activity programs. Prerequisite: 12 hours of HSES, or equivalent. LEC

HSES 824 Epidemiology and Concepts of Disease Causation (3). This course involves the study of the etiology and natural history of infectious and non-infectious 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 health and diseases; epidemiologic consequences of nuclear war and retrospective and prospective approaches in epidemiological research. Contemporary developmental methods for disease prevention will be critically reviewed. Prerequisite: HSES 573, or equivalent, or consent of instructor. LEC

HSES 826 Grant and Research Proposal Writing in Health (3). This is a course for students to examine the sources and areas which provide financial support for research projects in health. The areas of study include types of research funding available on a local, state, and federal level. The course also focuses on the selection and writing of a research proposal and strategies involved in securing financial support for research in health. A focus for the course will center upon preparing a research proposal for funding. Prerequisite: HSES 725, PRE 725, and PR E 710. 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 will be studied. Critiques of related research involving sport and social institutions, and socio-cultural groups in sport will be emphasized. Prerequisite: A course in Sociology of Sport or consent of instructor. 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 students. The use of performance tests and assessment tools will be emphasized. Students 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 timeline for physiologic adaptations to long-term physical activity. It describes the effects of physical activity on chronic disease. Descriptions of 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 mechanisms of energy intake and energy expenditure. It describes weight 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 elements and processes of curriculum construction in physical education for elementary, secondary, and post-secondary education, and the institutional and professional issues that affect these processes. A study of contemporary curricula structures in regard to planning, implementation, and evaluation of K-12 curricula and professional preparation curricula in physical education. Prerequisite: A course in physical education curriculum, or equivalent. LEC

HSES 837 Administration of Recreational Sports Programs (2). Organization and management theory and techniques for administering intramural sports programs in educational settings. Prerequisite: Philosophy, leadership, event management, financing, facility usage, and officials are 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 Interscholastic Sports Administration (3). Organization and management theory and techniques for administering athletic programs in secondary schools. Philosophy, environmental influences, leadership, event management, legal implications, financing, facility usage, and officials are discussed in relationship to contemporary demands in athletics. The course will examine the new Computer Modeling software programs that are available for administrative use in the athletics department. Prerequisite: Admitted to graduate school. A course in administration/management of Physical Education, Sport, Facilities Management, Recreation, or 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 exercise settings. The students will also be exposed to the reasons and methods of fund raising. Other areas that will be covered are: methods of marketing; the appropriate marketing strategy, significance of sports marketing preparing a marketing plan, and to become familiar with the resources available on the Internet in the marketing area. Prerequisite: Admitted to graduate school. A course in administration/management of Physical Education, Sport, Facilities Management, Recreation, or 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 recording of raw data, appropriate organization of raw data, selection of test for analysis of data, use of computer software, and computer programming for analysis and reporting results of the data will also be included. Prerequisite: PRE 710, PRE 720, or PRE 725. LEC

HSES 856 Innovative Methods for Teaching Rhythms and Physical Education (3). An advanced study of how traditional and contemporary teaching methods and techniques can be used to provide students in physical education classes the maximum opportunities for developing motor and rhythmic skills in a quality learning environment. The focus of the course is on the following content areas: rhythms, dance, games, modified sports, and cooperative activities. Research on teaching methods in physical education will be discussed and analyzed as they relate to the different content areas and developmental levels. Prerequisite: Completed 12 hours in physical education or consent of instructor. LEC

HSES 866 Contemporary Trends in Elementary and Secondary Physical Education (3). An in-depth study into the research and other forms of literature that will be made to study 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; variation in heart rate 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 890 Seminar in HSES (3). This course is designed to provide a general research seminar experience to graduate students in HSES. In particular, students will learn about faculty research activities and interests from a variety of specialty areas both within HSES 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, concent-
tation, self-efficacy, communications, mental rehearsal, team cohe-
sion, etc. will be explored as each relates to performance outcome.

The integration of exercise physiology and biomechanics with sport
psychology will be emphasized so the student understands the mental
aspects of performance relative to the others. Prerequisite: A course in
psychology of coaching or consent of instructor. LEC

HSES 897 Independent Study (1-4). Course graded on a satisfactory/
fail basis. Prerequisite: Consent of adviser and instructor. RSH

HSES 898 Master's Project (1-4). RSH

HSES 899 Master’s Thesis (1-6). RSH

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, their
materials, and innovative teaching techniques. The effectiveness of
various media such as films, slides, transparencies, microcomputers, and assess-
ment tools will be analyzed. Research concerning innovations in educa-
tion 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). Analy-
alysis of research studies completed in physical education administra-
tion. Findings reported in the literature concerning administrative re-
search in physical education will be discussed. Prerequisite: Graduate-
level courses in education administration and administration of physi-
cal education. LEC

HSES 910 Biochemistry of Exercise (3). This course will include an
in-depth examination of metabolic and endocrine principles as they re-
late to physical exercise and training. Specific topics will include sub-
strate utilization in exercise, metabolic controls, muscle biochemistry,
body composition, nutritional aspects and hormonal influences in exer-
cise. Both instructor and students will report on the most current liter-
ature relating to the topics. Prerequisite: Human biodynamics or a
cause in biochemistry. 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 behav-
ioral 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 athlet-
ics. The student will explore the current and future ramifications of each
issue and its potential effects on the profession. Prerequisite: Admission
the Health, Sport, and Exercise Sciences Doctoral Program. LEC

HSES 982 Research Trends in Health and Physical Education (3).
This course will study research literature, research designs, and pro-
gram models employed in health and physical education. The course
devotes special emphasis to developing student skills in analyzing re-
search and assessing key models in professional use. It emphasizes
interdisciplinary approaches in research trends. 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: ______ (2). To meet the
college teaching experience requirement for doctoral programs, a stu-
dent shall engage in a semester long, planned, instructional activity
that shall include college classroom teaching under supervision. Plan-
ning shall be done with the adviser and/or member of the faculty who
will supervise the experience. The activity shall be done under the su-
 pervision of a member of the University of Kansas faculty or by an indi-
vidual 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 Seminar in: ______ (1-4). A seminar in a current trend or issue
in health and physical education — primarily for doctoral students. LEC

HSES 999 Doctoral Dissertation (1-15). RSH

Music Education and Music Therapy
See the School of Fine Arts chapter of this catalog.
work in counseling psychology (including counseling theory, career development, interviewing, assessment, group counseling, professional issues, practicum), work is required in developmental psychology, research, and an elective area. 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 the degree requirements. Students in the Kansas City area may complete a portion of the work on the KU Edwards Campus in Overland Park.

Ph.D. in Counseling Psychology
Training Director: James Lichtenberg, jlicht@ku.edu, 621 Joseph R. Pearson Hall, (785) 864-9656

Prerequisites. Admission standards:
1. Undergraduate grade-point average of 3.0 or higher on a 4.0 scale.
2. Graduate grade-point average of 3.5 or higher on a 4.0 scale.
3. Graduate Record Examination general test scores.
4. Completed bachelor’s or master’s degree in counseling, psychology, or a related area.

At the first enrollment, a student reviews previous graduate work with an adviser to identify any course work in which the student is deficient and must expect to take course work in addition to the actual doctoral course requirements. Students holding master’s degrees in areas other than counseling should recognize that deficient course work may require up to a year to complete and must be taken in addition to (and in some instances before) the actual doctoral course requirements.

Admission. Required admission materials:
1. Graduate School Application Form.
2. Two copies of official transcripts of all previous college work, both graduate and undergraduate.
3. Official report of Graduate Record Examination general test scores. Request that scores be sent to Institution Number R0871-8, Department 99, the University of Kansas Graduate School, Graduate Applications, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535.
4. Program Information Form.
5. Three letters of recommendation from people who can assess the applicant’s prospects for completing the Ph.D. program in counseling psychology. One recommendation should be completed by the applicant’s master’s program/research adviser, if applicable. If the applicant has completed a practicum in counseling or a related area, one recommendation should be completed by the practicum supervisor.
6. Application Summary Sheet.
7. Assistantship application form.

To consider an applicant for admission in the fall, the department must receive all materials by January 15. 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 competence 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 801 Clinical Neuropsychology
   - PSYC 901 Biological Foundations of Psychopathology
2. Cognitive/Affective Bases of Behavior. Select one:
   - PSYC 723 Advanced Cognitive Psychology
   - PSYC 734 Theories of Perception
   - PSY 807 Theories and Research in Human Learning
3. Social Bases of Behavior. Select one:
   - PSY 774 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 900 Advanced Psychopathology
   - PSYC 902 Advanced Personality
   - PSY 900 Diagnosis and Psychopathology
5. History and Systems of Psychology.
   - PSYC 805 History of Psychology

Professional Core
   - PRE 710 Counseling and Interviewing Skills
   - PRE 742 Counseling Theory and Techniques
   - PRE 842 Counseling Practicum
   - PRE 844 Theory of Group Counseling
   - PRE 846 Career Development
   - PRE 875 Cross Cultural Counseling
   - PRE 900 Legal, Ethical, and Professional Issues in Professional 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
2. Assessment.
   - PRE 725 Educational Measurement
   - PRE 830 Individual and Group Assessment
   - PRE 951 Psychodiagnostic Assessment
   - 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.
4. Research Elective. Select one:
   - PRE 814 Nonparametric Statistics
   - PRE 818 Evaluating School Programs
   - PRE 822 Educational Scales, Questionnaires, and Sampling
   - PRE 903 Computer Applications for Statistical Analyses
   - PRE 905 Multivariate Analysis
   - PRE 921 Theory and Applications of Educational Measurement
   - PSYC 991 Structural Equation Analysis
   - PSYC 992 Analysis of Categorical Data
   - T&L 871 Introduction to Qualitative Research

Education Core. One course from each area (may be satisfied by course work completed elsewhere in the program):
   - Learning or Development
   - Statistics
   - History or Philosophy of Education (from list of approved courses)
   - Curriculum or Instruction (satisfies by PRE 945 Supervision in Counseling)
   - Elective Area. Fifteen credit hours from PRE or any related field, 3 of which may be from independent study or field experience enrollments.
   - College Teaching Experience (minimum of 2 credit hours).
   - PRE 996 College Teaching Experience in: (Supervision)
   - Internship in Counseling Psychology (2 credit hours for three consecutive terms).
   - PRE 990 Internship in Counseling Psychology
   - Dissertation (minimum of 18 credit hours).
   - PRE 999 Doctoral Dissertation

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Students entering from the bachelor’s level have two options. They may complete PRE 715, PRE 740, PRE 742, PRE 830, PRE 842, PRE 844, PRE 846, PRE 875, PRE 900, PRE 710/PRE 711, a course in human development, and PRE 899, PRE 898, or a written comprehensive examination to receive an M.S. degree. If they choose not to receive an M.S., their status will be changed to aspirant after they complete PRE 715, PRE 740, PRE 742, PRE 830, PRE 842, PRE 844, PRE 875, PRE 900, PRE 811, and a course in human development with a 3.5 grade-point average and upon faculty recommendation.

Comprehensive Examination. After completing course work, the student must pass a written comprehensive examination based on the curricular requirements of the counseling psychology program. After satisfactory completion of the written examination, the student must pass a comprehensive oral examination. The program defines the nature of this examination.

Internship. The primary criteria for internship placement are appropriate professional opportunities, adequate supervision by a qualified counseling psychologist, student financial support by the agency offering the internship, and accreditation of the internship site by the American Psychological Association. A student may initiate contacts to find internship settings. A student is not permitted to begin the internship until the comprehensive examination has been 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

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. Opportunities are available each year for students to be involved in basic and applied educational research.

Admission. Applicants for M.S.Ed. or Ph.D. programs must submit the following application materials:

1. Graduate School Application Form.
2. Two copies of official transcripts of all previous college work.
3. Graduate Record Examination general test scores.
4. Three letters of recommendation.
5. Letter of intent outlining the student’s background and professional objectives.

Admissions decisions are made in fall and spring semesters. Admission deadlines are November 15 for admission for spring semester and February 15 for admission for the summer or following fall semester.

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.

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

1. Research and Evaluation.
   PRE 715 Understanding Research in Education
   All students must take PRE 715. A student must take at least one course in each of the following areas. Other courses may be substituted with approval of the advisory committee.

2. Learning and Instruction.
   Typical courses include
   PRE 704 Advanced Educational Psychology: Learning Processes in Education
   PRE 807 Theories and Research in Human Learning

3. Applied Human Development.
   Typical courses include
   PRE 700 Advanced Educational Psychology: Development and Education of the Adolescent
   PRE 705 Advanced Educational Psychology: The Development and Education of the Child

   Typical courses include
   PRE 720 Educational Measurement in the Classroom
   PRE 725 Educational Measurement

5. Statistics.
   Typical courses include
   PRE 740 Introduction to Statistical Analysis and PRE 741 Lab for Introduction to Statistical Analysis
   PRE 811 Analysis of Variance

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, searchable hypotheses. In the doctoral 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. A student must take at least one course at or above the 800 level in each of the following areas. This course work must be in addition to that required for the educational psychology and research master’s degree.

1. Learning and Instruction.
   Typical courses include
   PRE 857 Theories and Research in Human Learning
   PRE 897 The Psychology of Instruction and Human Learning

2. Applied Human Development.
   Typical courses include
   PRE 800 Development During Youth and Adulthood
   PRE 806 Issues in Human Growth and Development

   Typical courses include
   PRE 822 Educational Scales, Questionnaires, and Sampling
   PRE 921 Theory and Applications of Educational Measurement

   Typical courses include
   PRE 811 Analysis of Variance
   PRE 814 Nonparametric Statistics
   PRE 904 Regression Analysis
   PRE 905 Multivariate Analysis

5. Research and Evaluation.
   Typical courses include
   PRE 816 Evaluating School Programs
   PRE 916 Educational Evaluation: Theory and Practice

   PRE 901 Research Practicum in: _____

School of Education Core Requirements in Curriculum and Instruction and Educational History or Philosophy. All students must enroll
Program Requirements. The Ed.S. 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.

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. In addition, students who do not have a bachelor's degree in education must complete a general educational curriculum course (T&L 740 or T&L 842) and a history and philosophy of education course (T&L 770, T&L 771, or T&L 775) to fulfill state licensure requirements.

The standard course sequence for students in the Ed.S. program is as follows:

First Year, Fall Semester
- PRE 770 Developmental Psychopathology: Diagnosis, Intervention, and Prevention
- PRE 725 Educational Measurement
- PRE 690 Introduction to School Psychology
- SPED 725 Introduction to the Psychology and Education of Exceptional Children and Youth
- PRE 710/PRD 711 Introduction to Statistical Analysis/Lab (may be waived by examination)

First Year, Spring Semester
- PRE 703 Constructive Classroom Discipline
- PRE 805 Individual Intelligence Testing
- PRE 860 Assessment of Behavior Problems and Personality
- PRE 965 Foundations of Psychoeducational Consultation

First Year, Summer Session
- PRE 705 Human Development Through the Life Span
- PRE 998 Seminar in School Psychology
- PRE 835 Clinical Techniques in Academic Assessment and Intervention

Second Year, Fall Semester
- PRE 855 Psychoeducational Clinic I: Assessment, Consultation, and Intervention
- PRE 910 Practicum in School Psychology
- PRE 975 Therapeutic Intervention: Home and School
- PRE 947 Specialist Research

Second Year, Spring Semester
- PRE 704 Advanced Educational Psychology: Learning Processes in Education
- PRE 911 Advanced Practicum in School Psychology
- PRE 947 Specialist Research
- PRE 715 Understanding Research in Education
- PRE 865 Psychoeducational Clinic II: Assessment, Consultation, and Intervention

Third Year
- PRE 991 Ed.S. Internship (Full-year school psychology 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 an academic conference.
Psychology & Research in Education

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 dissertation 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.

For help locating course descriptions, see the Directory of Courses, pages 5-6.

PRE is considering changes to its graduate studies requirements. Consult the department for current information.

Course Work Requirements

Professional School Psychology Area

1. Psychodiagnostic Assessment: All students take all four courses.
   - PRE 770 Developmental Psychopathology, Diagnosis, Intervention, and Prevention
   - PRE 885 Individual Intelligence Testing
   - PRE 860 Assessment of Behavior Problems and Personality
   - PRE 960 Assessment of Preschool Development

2. Consultation, Classroom Management, and Therapeutic Intervention: All students take the following courses.
   - PRE 705 Constructive Classroom Discipline
   - PRE 975 Therapeutic Interventions: Home and School
   - PRE 965 Foundations of Psychoeducational Consultation

3. Learning and Development: All students take both courses.
   - PRE 704 Advanced Educational Psychology: Learning Processes in Education
   - PRE 705 Human Development Through the Life Span

4. Statistics, Psychoeducational Measurement, and Research Design: All students take all four courses.
   - PRE 710 Introduction to Statistical Analysis
   - PRE 711 Lab for Introduction to Statistical Analysis
   - PRE 715 Understanding Research in Education
   - PRE 725 Educational Measurement

5. Professional Practice: All students take all three courses.
   - PRE 910 Practicum in School Psychology
   - PRE 911 Advanced Practicum in School Psychology
   - PRE 998 Seminar in School Psychology

6. Special Education: All students take.
   - SPED 725 Introduction to the Psychology and Education of Exceptional Children and Youth

7. Role of Education in America (required for students not holding the bachelor's degree in education): All students take one of the first two courses and one of the last three courses.
   - T&L 740 Foundations of Curriculum and Instruction or T&L 842 Foundations of Curriculum Development and T&L 770 History and Philosophy of Education or T&L 771 Philosophy of Education I or T&L 775 History of Education and Culture in America

Psychological Foundations. All students must take course work in the five psychological core areas.

1. Biological Bases of Behavior (3 hours). Choose one:
   - PSYC 864 Clinical Neuropsychology
   - PSYC 961 Biological Foundations of Psychopathology
   - PSYC 972 Seminar in Psychobiology
   - HDFL 730 Developmental Neuropsychology

2. Cognitive-affective Bases of Behavior (3 hours; met through Professional School Psychology Area courses).

3. Social Bases of Behavior (3 hours; met through Professional School Psychology Area courses, plus one course from this list):
   - PSYC 774 Advanced Social Psychology I or PSYC 777 Social Psychology: Theory, Research, and Clinical Applications or PSYC 892 Social psychological Aspects of Health, Disability, and Associated Life Stress

4. Individual Bases of Behavior (3 hours; met through Professional School Psychology Area courses).

5. History and Systems of Psychology (3 hours; met through Professional School Psychology Area courses, plus one course from the following list):
   - PSYC 895 History of Psychology or HDFL 891 The History and Systems of Psychology

Research Skills. Students must take the following three courses, plus 6 hours in measurement, statistics, evaluation, or research design.

- PRE 811 Analysis of Variance
- PRE 814 Nonparametric Statistics
- PRE 902 Research Methodology in Education

Education Core (12 hours). Students must complete a course in curriculum or instruction, history or philosophy of education, learning and development, and research design or statistics. The research design or statistics requirement is met in the research skills area. Students not holding the bachelor's degree in education will have met the curriculum or instruction and the history and philosophy of education requirements through the professional school psychology area, leaving the learning and development requirement to be met. PRE 705 fulfills human development requirements.

Appreciation/Sensitivity to Ethnic and Cultural Diversity. All students must complete one of the following courses:
- T&L 743 Multicultural Education
- PRE 875 Cross Cultural Counseling
- Supervised College Teaching

All students must take the following course:
- PRE 996 College Teaching Experience

Minor Area. A minor at least 12 hours of approved study outside the School of Education is required. If the student wishes to pursue a minor in the School of Education, permission to do so must be obtained. The minor should be supportive and broadening of the student's professional preparation and interests. Courses in the minor usually will not fulfill other program content requirements. Prior degree course work may not be applied to the minor. Exceptions might occur as agreed between the student and the minor adviser.

Ph.D. Internship. All students must complete a full-year internship:
- PRE 992 Ph.D. Internship in School Psychology

Psychology and Research in Education Courses

- PRE 598 Special Course: ___ (1-5)
- PRE 602 Resident Staff Skill Enhancement and Administration (2-3)
- PRE 690 Introduction to School Psychology (3)
- PRE 700 Advanced Educational Psychology: Development and Education of the Adolescent (2-3).
- T&L 740 Foundations of Curriculum and Instruction or T&L 842 Foundations of Curriculum Development and T&L 770 History and Philosophy of Education or T&L 771 Philosophy of Education I or T&L 775 History of Education and Culture in America

- PRE 703 Constructive Classroom Discipline (3). This course will examine concepts and techniques of constructive classroom management. Various theoretical orientations including humanism and behaviorism will be considered. Emphasis will be on the identification of strategies that teachers can use (1) to facilitate an environment that reduces the likelihood of misbehavior occurring, and (2) to cope constructively with individuals and groups of children to resolve difficulties that arise in the classroom. The class should have value to classroom teachers, school psychologists, counselors, and other school consultants.
- 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 educational settings. Key issues include the study of language, memory, concepts, motivation and social factors affecting learning processes.
- PRE 705 Human Development through the Lifespan (3). This course will cover the social, emotional, psychological, and cognitive changes that occur from conception through death. Methodological issues will
also be addressed. Prerequisite: A graduate or undergradua te course in psychology. LEC

PRE 710 Introduction to Statistical Analysis (3). Emphasis on the conceptual understandings of statistical analysis of educational data. Includes univariate and bivariate descriptive statistics, sampling distributions, statistical estimation, hypothesis testing and procedures in test ing statistical hypothesis for one and two sample designs. Prerequisite: Concurrent enrollment in PRE 711 required, or with the permission of instructor on the basis of knowledge of statistical packages presented in PRE 711. LEC

PRE 711 Lab for Introduction to Statistical Analysis (1). Creation and manipulation of data sets. Analysis of data with statistical pack ages, 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 811 or with the permission of the instructor. LAB

PRE 715 Understanding Research in Education (3). This course in troduces the concepts and skills involved in understanding and analy zing research in education and related areas. The course provides an overview of basic, general knowledge of various research methodolo gies. Students should expect to study much of this material 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 re search articles and reports. Topics in the course include quantitative and qualitative methods and designs, historical and descriptive re search, and program evaluation. (This course serves as the student's introduction to a research methods course in the first 12 hours of graduate study.)

LEC

PRE 720 Educational Measurement in the Classroom (3). An intro duction to concepts and skills basic to the development of instruments and procedures for formative and summative classroom evaluation. Planning student evaluation, coordinating evaluation with objectives, item development, item analysis, relating evaluation to instruction, grading, and reporting to students, parents and the school. Norm refer enced and criterion referenced tests are considered. LEC

PRE 725 Educational Measurement (3). The course is an introduc tion to the application of the concepts of reliability, validity, and practic ality 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 norm statistics, percentiles, and norm referenced scores are considered. LEC

PRE 730 Counseling and Consultation Skills for Teachers (2). This course is designed to give an overview of basic counseling and consul tation skills and their application to the classroom. Areas covered in clude self-awareness, personal values, decision making, communica tion, consultation skills, evaluation of self and responsibility for self as a teacher. Course format includes lectures and small group ex periences. Prerequisite: Admission to fifth-year program or graduate certification program. 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 microcoun seling training; 2) the student's use of these skills effectively and appropriate ly in a simulated counseling session; 3) the 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 ex amination of several major theories of counseling and therapy includ ing psychodynamic views, person-centered, behavioral, and cognitive behavioral approaches. Attention given to research reviews and factors affecting the development of counseling theories. 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. Coverage of empirically-based intervention strategies and prevention programs. Graduate student standing. LEC

PRE 790 Research and Evaluation Proposal Development (3). A course for students designing a research or evaluation proposal leading to data collection. Specific topics considered include formulating a problem for study, reviewing the literature, and selecting appropriate research and evaluation designs, instrumentation, and data analysis is sues. The goal of the course is to aid students in the preparation of re search proposals at the master's level. LEC

PRE 797 Independent Readings and Research in: (1-3). Opportunity for students to participate in supervised reading and research in special topics of interest. (For regularly scheduled courses, topics and credit are arranged by advisement; May not be used to substitute for regularly scheduled course offerings. Intended for students with appropriate undergraduate or graduate preparation but without extensive graduate course background in the area of proposed study. (Students with extensive graduate work should enroll in PRE 997; undergraduate students may enroll in PRE 497.))

RSH

PRE 798 Special Course: (1-5). A special course of study to meet current needs of education professionals—primarily for graduate students. Course is graded on a satisfactory/fail basis. LEC

PRE 800 Development during Youth and Adulthood (3). An examination from a life-span perspective of the role of development in the formation of personal characteristics and how these characteristics relate to functioning as an effective helping professional. 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 and survey extensively the research and theoretical literature. Prerequisite: Prior enrollment in a course on naturalistic or experimental research methods. LEC

PRE 805 Individual Intelligence Testing (1-3). Supervised experience in the administration, scoring, and interpretation of the major individ ual intelligence tests for children, adolescents, and adults. Other areas to be covered in this course will include models of intelligence and fac tors influencing intelligence; measurement of intelligence; characteristi cs of instruments used to assess cognitive abilities; ethical and legal issues in the use of intelligence tests; and the use of cognitive assessments for iden tification and diagnosis. Prerequisite: PRE 725 and permission of instruc tor. LEC

PRE 806 Issues in Human Growth and Development (3). An overview and analysis of selected issues in the field of human growth and development. The focus will be on major issues in the theoretical and methodological nature that affect the field of developmental psychology and applications to social and educational settings. Prerequisite: Prior completion of a course in developmental psychology. LEC

PRE 807 Theories and Research in: (1-3). 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 set and problem solving. Emphasis is placed on student development of research proposals in the area of human learning and achievement. Prerequisite: Permission of instruc tor. LEC

PRE 811 Analysis of Variance (3). Analysis of variance techniques in cluding one-way ANOVA, planned and post hoc comparisons, multiway ANOVA, repeated measures ANOVA, and mixed designs. Prerequisite: PRE 710 and PRE 711. LEC

PRE 812 Meta-Analysis (3). Statistical methods to summarize results from multiple studies. Prerequisite: PRE 811. LEC

PRE 814 Nonparametric Statistics (3). Methods of analysis for nonpara metric and ranked data, multiway 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 develop ment 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 822 Educational Scales, Questionnaires, and Sampling (3). De velopment, construction, validation and scaling of noncognitive instru ments including questionnaires, surveys, checklists, rating scales and unobtrusive measures. The sampling methodology is emphasized. LEC

PRE 823 Measurement in Education (3). An overview of basic concepts pertaining to selection and interpretation of both standardized and non-standardized assessment procedures and devices with attention given to communicating information with the context of the counseling relationship. Prerequisite: PRE 725 or comparable undergraduate principles of measurement course. LEC

PRE 835 Clinical Techniques in Academic Assessment and Inter vention (3). Students will learn techniques of formal and informal as sessment of academic skills in school-aged students. In addition, stu dents will learn consultation and intervention approaches and strategies for use with students who have academic delays and disabilities. 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
The KU Center for Research on Learning conducts research to enhance learning and performance in school and non-school settings.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

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) (1). 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 cover counseling and other counseling related activities within the particular counseling setting. Students enroll in practiced for the level most closely related to their professional goals, i.e., either elementary, secondary, counseling psychology. Graded on a satisfactory/fail basis. Prerequisite: PRE 740, PRE 742, and PRE 880, and prior or concurrent enrollment in PRE 850, 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 types of groups, theoretical orientation of groups, stages 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 846 Career Development (3). Stresses the importance of career development in education, with an emphasis on developmental planning. Course includes topics such as delivery systems, utility of career development theory, sexism and racism in career development, the effects of sex role socialization, nature of the work, evaluation of career information, use of career information in individual and group counseling, and the role of empirical research in career development theory and practice. LEC

PRE 850 Human Relationship Skills in the Classroom (3). The purpose of this course is to provide educators with an awareness and skill training in basic human relationship/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 Psychosocial Education 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, peer review, and case conferences are essential elements of this course. Students work with clients in the on campus learning center under supervision. Topics covered include the classroom. Prerequisite: Graduate student standing in the School Psychology program and permission of instructor. LEC

PRE 860 Assessment of Behavior Problems and Personality (3). The purpose of this course is to examine appropriate assessment techniques for the evaluation of behavior problems. Interview procedures, behavioral observation strategies, behavior rating scales and checklists, self-report inventories, and rational theoretical techniques will be introduced. The intent is to place these assessment approaches in their theoretical contexts and to discuss how they could be used by pupil personnel specialists to understand the problem behavior and plan interventions to enhance students' personal adjustment and achievement in the classroom. Prerequisite: PRE 770, graduate standing in the school psychology program, or permission of instructor. LEC

PRE 865 Psychosocial Education Clinic 2: Assessment, Consultation, and Intervention (2). A continuation of School Psychology Clinic I, where students will be performing the same activities at a higher level of autonomy and independence. Prerequisite: Graduate student standing in the School Psychology program, PRE 855, and permission of instructor. LEC

PRE 870 Developing, Modifying, and Maintaining Gifted/Talented Education Programs (3). An overview of issues, models and methods for implementing and assessing special programs for gifted and talented students. Topics include: selecting and implementing program systems and models, orienting staff and parents to the special education program, and implementing student programs with the general education staff. Prerequisite: TEL 744, TEL 745, TEL 747, or consent of instructor. LEC

PRE 871 The Creative Process (3). An investigation of the nature of the creative process, emphasizing theories and models of the origins and development of creativity. Students learn about, apply and develop techniques for defining and identifying creative potential and for encouraging creative thinking among children and youth. Prerequisite: PRE 870 or consent of instructor. LEC

PRE 875 Cross Cultural Counseling (3). Examines the role and influence of culture within a variety of counseling theories including the identification of cultural assumptions and limits of theories. The course will assist in understanding cultural differences of racial minorities and socioeconomic subgroups and will provide opportunities for self-examination of cultural assumptions/values and effects within counseling. Prerequisite: PRE 742 or equivalent. LEC

PRE 880 Legal, Ethical, and Professional Issues in Counseling (3). An examination of legal, ethical, and professional standards and issues affecting the practice of professional counseling. Topics include an overview of the history and organization of the counseling profession, legislative regulation of counselors, ethical standards of the counseling profession, standards for professional practice, and issues of practice liability and risk management. LEC

PRE 890 Diagnosis and Psychopathology (3). An examination of psychological disorders from a counseling psychology perspective that emphasizes strengths. The course will cover the Diagnostic and Statistical Manual (DSM), as well as alternative taxonomies, exploring personality as it ranges from normal personality styles to personality disorders. Prerequisite: Consent of instructor. LEC

PRE 891 Advanced Practicum in School Psychology (3). A supervised practicum experience for students in School Psychology which is designed to provide an opportunity for the student to apply clinical and research skills for working with students, educators, and parents. LEC

PRE 892 Research Practicum in: _____ (1-3). This course is designed to give students experience in conducting research. It is expected that students will take this course for at least two consecutive semesters. This course fulfills the requirement by the School of Education for a two semester, research practicum course.) Prerequisite: Doctoral student status in a program in the Department of Psychology and Research in Education. RSH

PRE 901 Research Practicum in: _____ (3). An examination 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 416. LEC

PRE 902 Research Methodology in Education (3). An examination 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 416. LEC

PRE 903 Computer Applications for Statistical Analyses (3). Computer applications for a variety of statistical techniques. Emphasis may be with applications on microcomputers and/or mainframe. Prerequisite: PRE 811. LEC

PRE 904 Regression Analysis (3). Multiple correlation/regression techniques, including polynomials, analysis of interactions, dummy coding, non-orthogonal analysis of variance, and analysis of covariance. Prerequisite: Pre 811 and experience with a statistical software package. 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 Confirmatory Factor Analysis and Multivariate Statistical Modeling (3). Confirmatory factor analysis, path analysis, and structural equation modeling. Prerequisite: PRE 905. 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 807 and PRE 715 or permission of instructor. LEC

PRE 910 Practicum in School Psychology (3). Supervised practice in the application of psychological theory of educational problems. Includes work useful with exceptional children as well as experience in the application of such areas as mental hygiene and learning theory to problems involving the total school population. (Same as SPED 801) Prerequisite: Permission of adviser and instructor. LEC

PRE 911 Advanced Practicum in School Psychology (3). A continuation of PRE 910 with special emphasis on remedial techniques associated with learning disabilities. (Same as SPED 802.) Prerequisite: PRE 910 and permission of adviser and instructor. LEC

PRE 916 Educational Evaluation: Theory and Practice (3). The course will treat an intensive critical study of various views of evaluation as it exists opposite the experimental research process, emphasizing the operational definitions of objectives, existing models, taxonomies, and structures, and goal-setting and summarizing evaluation data. Prerequisite: PRE 710 and PRE 816 or equivalents or permission of instructor. LEC

Psychology & Research in Education
PRE 918 Seminar in Current Issues and Trends in: _____ (1-3). An examination of selected current issues and trends. (This course fulfills the requirement for the School of Education for a course in current issues and trends.) Prerequisite: Doctoral student status in a program in the Department of Psychology and Research in Education. LEC

PRE 921 Theory and Applications of Educational Measurement (3). Application of theory including classical theories of reliability and validity, item analysis, item sampling, problems in educational test development and use in areas such as evaluation, research, placement, and selection. Prerequisite: PRE 725 and LEC

PRE 922 Item Response Theory (3). Theoretical foundations and practical applications of item response theory in educational measurement. Prerequisite: PRE 921. LEC

PRE 940 Advanced Studies in Educational Psychology and Research (3). A course designed to offer a comprehensive view of the field of educational psychology and research. The course will treat a series of thematic areas with a focus on latest developments and emerging theories in learning, development and quantitative methods. Intended for post-master's level students. Prerequisite: Prior graduate level course work in development, learning, measurement, and statistics. LEC

PRE 944 Practicum in Group Counseling (3). Group practicum is designed to integrate theories, procedures, and research in group counseling. Each student is to meet regularly with small groups of clients and make tape recordings and/or records of group and individual behavior. The student will meet in the seminar with other group members; problems of group leadership, and techniques for individual behavior change through group interaction. Prerequisite: PRE 842, PRE 844, and consent of instructor. FLD

PRE 945 Supervision in Counseling (3). 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. 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. Prerequisite: PRE 842 or equivalent. LEC

PRE 949 Advanced Practicum II (6). Intensive counseling practice, including group and individual supervision, that may be taken either through Counseling and Psychological Services or an approved site outside of the university. Focus is on the acquisition and demonstration of advanced counseling 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 semester classes. A grade of incomplete will be granted at the end of the regular fall grading period, with the regular fall grade being granted after completion of fall semester responsibilities. Prerequisite: Satisfactory completion of PRE 948 and or prior or concurrent enrollment in PRE 951. LEC

PRE 950 Cognitive Theory and Strategies in Counseling Psychology (3). An examination of a variety of theoretical perspectives and strategies used in the practice of counseling psychology. Consideration of theoretical perspectives, research functions, assessment strategies, and application of techniques. Prerequisite: PRE doctoral student status or consent of instructor. 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 conceptualization/diagnosis, and integrative report writing. Prerequisite: PRE 830 and either doctoral or master's student standing in counseling psychology or consent of instructor. LEC

PRE 952 Advanced Counseling Theory and Research (3). An advanced treatment of theory, research, and practice issues central to Counseling Psychology. Topics include theoretical and research paradigms in Counseling Psychology: the relationship of theory and research to practice; and evidence on factors influencing counseling processes and outcomes. Prerequisite: Counseling Psychology doctoral student status or consent of instructor. LEC

PRE 953 Interactional Perspectives on Counseling and Personality (3). A study of personality and therapeutic change from systemic, 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 self-care 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-whites) will be studied as well as alternative methods of delivery in career development and counseling. Prerequisite: PRE 846 or equivalent. LEC

PRE 955 Research in Counseling (1). The course for research in counseling psychology is designed to help the student conduct a research study in an area related to counseling psychology. The seminar has two major overall goals: 1) to provide an opportunity for a student to actually conduct a research study, and 2) to help students to get more knowledge about counseling psychology. A grade of “P” will be given for successful progress at the end of the first term of enrollment. Students will receive a letter grade after adequate completion of the course. LEC

PRE 956 Theory of Marriage and Family Counseling (3). A survey of contemporary systems of marital and family counseling. Consideration 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: Graduate student status as a master’s student in counseling psychology program or written permission of instructor. LEC

PRE 960 Assessment of Preschool Development (3). The purpose of this course is to introduce the student to norm-referenced and criterion-referenced procedures in the assessment of various domains of infant and preschool development. Instruments appropriate for the sequential stages of the assessment process will be emphasized including screening, diagnosis, educational planning and evaluation. Each instrument introduced will be evaluated, critically. Furthermore, the course will emphasize the linkage between assessment and intervention. It is the intent of the course also to give the students practical experience in administering representative instruments from the various domains. Prerequisites: PRE 702, PRE 725, and permission of instructor. LEC

PRE 961 Models of Consultation (3). This course is designed to examine consultation models and their application in the field of Counseling Psychology. Major models of consultation in diverse settings will be examined. Prerequisite: Graduate student status in counseling psychology or written permission of instructor. LEC

PRE 965 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 966 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 consultation activities. Prerequisite: Approval of instructor. LEC

PRE 970 Counseling with Adults (3). This course will focus on the utilization and integration of adult life span theory and issues 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 research projects related to both lifespan and effective counseling practices. 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 and also includes applied consultation experiences for the student. Class time is used to supervise the student's field-based consultation activities. Prerequisite: Approval of instructor. LEC

PRE 980 Advanced Topics: _____ (1-3). A special course of study to meet current need of education professionals—primarily for post-master's level students. LEC

PRE 990 Internship in Counseling Psychology (2). 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 student’s adviser, the program training director, and internship setting supervisors. Responsibility is accepted for the internships of counseling psychology doctoral students. Prerequisite: Doctoral degree-seeking status in counseling psychology, completion of Ph.D. comprehensive examinations, and consent of counseling psychology faculty. FLD

PRE 991 Ed.S. Internship (1-5). This course has two components: 1) a supervised experience as a practicing school psychologist, and 2) a group supervision class emphasizing case presentations and other integrative practice elements. The student functions as a provisionally certified school psychologist. Prerequisite: Completion of Ed.S. degree. FLD

PRE 992 Ph.D. Internship in School Psychology. This is a one year, supervised experience in an approved setting. The structure and content of the experience follows guidelines of several professional organizations including The American Psychological Association and the
National Association of School Psychologists. Prerequisite: Approval of School Psychologist committee. FLD

PRE 995 Field Experience in: (1-5). Supervised and directed experiences in selected educational settings. The advisor 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 advisor. 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

PRE 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 college classroom teaching under supervision. Planning shall be done with the advisor 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

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). RSH

Special Education

Chair: Chriss Walther-Thomas
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 521
Lawrence, KS 66045-3101, (785) 864-4954
www.soe.ku.edu/sped

Graduate Adviser: Eva Horn, evahorn@ku.edu,
521 Joseph R. Pearson Hall, (785) 588-0615
Admissions Officer: Sherrie Saathoff, ssaatoff@ku.edu,
521 Joseph R. Pearson Hall, (785) 864-0556

Professors: Chaffin, Clark, Deshler, Greenwood, Meyen, Peterson, Sailor, Schumaker, Simpson, Skrtic, A. Turnbull, H.R. Turnbull, Walther-Thomas

Professors Emeriti: Gallagher, Guess, Moran, Whelan
Associate Professors: Gautt, Horn, Knowlton, Lenz, Myles, Roberts, Robinson, Thompson, Wehmeyer
Assistant Professors: Brown, Smith

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

The department provides comprehensive graduate programs for students planning professional careers in special education and related fields. Program options include preparation for roles as teachers; consultants, supervisors; program managers; clinical practitioners; teacher educators; family and community services coordinators; leadership and policy-makers at national, state, or local levels; and researchers. Students preparing for roles as special education teachers may concentrate their studies in one of four areas: Adaptive Curriculum (students with learning problems in the mild through moderate range), Functional Curriculum (students with learning, physical, and sensory problems in the moderate through profound range), Deaf/Hard of Hearing, and Early Childhood. These options lead to Kansas licensure at the same level as that held in general education (elementary, middle/junior high school, high school). Students seeking only the master’s degree may concentrate in deaf/hard of hearing, autism, severe cognitive and multiple disabilities, early childhood education, and career development/transition education.

Post-master’s and doctoral program emphases include disability group concentrations in learning disabilities, emotional and behavior disorders, autism, deaf/hard of hearing, severe cognitive and multiple disabilities, early childhood education, and professional role preparation in special education administration, program supervision and coordination, special education technology, law and public policy, families and disability, service integration, and career development/transition education.

Graduate degrees associated with the department’s comprehensive programs are the Master of Science in Education (M.S.Ed.), the Doctor of Education (Ed.D.), and the Doctor of Philosophy (Ph.D.). Admission and program descriptions and requirements for the degree options may be obtained from the department’s admissions officer or at www.soe.ku.edu/sped. Upon admission to any one of the degree programs, a student and his or her faculty adviser develop a plan of study in accordance with the student’s professional interests and goals.

The department conducts graduate degree programs on the main campus in Lawrence with selected programs on the KU Edwards Campus in Overland Park. Formal courses and practica opportunities are offered at each site. The main campus has media centers, clinics, early childhood demonstration classrooms, interdisciplinary experiences, and research opportunities that support the department’s mission of teaching, scholarship, and service. Students can expect to complete some graduate work on each campus, but most of their courses and practica will be on the campus where the chosen concentration is offered.

A variety of courses also are offered by Internet, TV distance education, and independent study in cooperation with the KU Division of Continuing Education.

M.S. in Education Degree

Students completing this degree usually work as classroom or consultant teachers of children and youth with disabilities in schools, clinics, hospitals, residential treatment centers, community-based service centers, or early childhood programs. For those who are already licensed to teach students without disabilities, completion of this degree may qualify them for endorsement to teach one or a combination of the disability areas. In addition, this degree may be completed by students who are not seeking teaching positions, e.g., school nurses, occupational therapists, physical therapists, and other human services professionals. Yet another application for this degree is for teachers of students without disabilities who wish to expand their knowledge and skills by adding professional competence in teaching children and youth with disabilities in regular classroom environments.

The master’s program for students who are also pursuing special education teacher licensure ranges from 34 credit hours (Functional Curriculum) to 42 credit hours (Adaptive Curriculum). A common core of courses is required for students in the adaptive and functional programs (20-23 hours), and emphasis-specific courses are required for each area (11 credit hours for functional, 19 credit hours for adaptive). Students pursuing a special education endorsement are recommended for provisional endorsement after com-
Doctoral Degrees

The department offers two doctoral degree programs. They are similar in many aspects, but each serves a different need for the special educator seeking to acquire knowledge and skills necessary for leadership positions. Both degrees require intensive and rigorous study in special education foundations, areas of disability, curriculum, teaching, program development, and research skills. Both also require study in departments that support the special education major. The Graduate Record Examination is required for admission. Students must take the verbal, quantitative, and analytical sections of the GRE.

Doctor of Education. This degree is for experienced special educators who desire leadership positions in school districts or other agencies related to program management, development, and evaluation. Those interested in preparing special education and related services personnel also may select this degree. Students complete a sequence of courses that give them applied research knowledge and skills. Specific core and research skills for the Doctor of Education are described in the department’s Guide to the Doctoral Program, online at www.soe.ku.edu/sped. Briefly, the research skills requirement may be satisfied by completing a minimum of 12 hours of graduate study in one or more supporting areas that develop skills relevant to understanding, promoting, and evaluating special education practice. Supporting areas may include statistics, assessment and evaluation, qualitative methods, or historical or philosophical methods (at least one course in evaluation is required). In addition to research skills, students complete a structured, 3-credit-hour practicum in a supervised internship setting.

Doctor of Philosophy. This degree emphasizes acquisition of high-level research skills needed to develop and disseminate new knowledge to improve services for children, youth, and adults with disabilities. Courses and practica or internships focus on interdisciplinary studies, teacher education, and other aspects of program development. Graduates are prepared for leadership roles in teacher education, research, program management, public policy, or clinical practice. Specific core and research skills for the Ph.D. are described in the department’s Guide to the Doctoral Program, online at www.soe.ku.edu/sped. Briefly, the research skills requirement may be satisfied by completing a minimum of 6 hours of graduate study in statistics and a minimum of 9 hours in one or more of the following areas relevant to the student’s research: quantitative methods, qualitative methods, measurement and assessment, historical and philosophical methods, or foreign language (a reading knowledge of one foreign language is equivalent to 6 hours of credit).

Special Education Courses

- 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).
- SPED 635 Introduction to Exceptionalities in Children and Youth: ____ (3).
- SPED 641 Methods: Students with Exceptionalities in General Education and Learning Center Settings (3).
- SPED 660 Instructional Methods for Exceptional Children and Youth: ____ (3).
- SPED 707 Exceptional Child and Adolescent in the Regular Classroom (2). This course is designed to enable students to master and apply the instructional and communicative skills that can assist and facilitate appropriate and productive integration of exceptional children and youth within regular classroom and school contexts. Instructional skills addressed at the mastery and generalization levels include the development and implementation of instructional plans reflective of the individual needs of exceptional learners. Communicative skills include the establishment and maintenance of lines of communication with all individuals concerned with the development of the student. Although there are no formal field experiences, it should be noted that this course is designed to be taken during the fifth year of the Ph.D. program. Prerequisite: HSES 500, MEMT 500, T&T 500, or VAE 500. LEC.
- SPED 710 Methods of Teaching Language to the Deaf I (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 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 use to provide instructional services to exceptional children 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 as a general overview of several areas. LEC.
- SPED 718 Instructional Planning for Exceptional Children and Youth: ____ (1-3). Provides knowledge and skills to select, adapt, and sequence instructional methods and materials for exceptional pupils. Individualized and group instruction procedures are stressed. Separate sections for one or inclusive of two or more exceptionality categories and types of instructional arrangements. Prerequisite: SPED 710 or equivalent introductory course on exceptional children and youth. LEC.
- SPED 725 Introduction to the Psychology and Education of Exceptional Children in Regular Classrooms (3). Current practices in the identification, placement, and education of exceptional children and youth. Emphasis on patterns of social, cognitive, language, and physical development of exceptional children. Social, political, and economic advocacy issues. Prerequisite: One course in Child Development. LEC.
- SPED 729 Introduction to Computing in 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. Topics covered include an overview of computing applications and the impact of computers on society, an introduction to computer hardware and associated concepts, introductory programming concepts, a survey of instructional and instructional-support applications of computers including examples of related software, software evaluation techniques, and an overview of microcomputing. Students will acquire hands-on operating experience with microcomputers through scheduled laboratory periods. (Same as T&T 729). LEC.
- SPED 731 Characteristics of Students Needing an Adaptive Curriculum (3). This course is designed as an introduction to the definition, characteristics, causes, assessment, and specific remedial techniques for students needing an adaptive curriculum. The needs for specialized services to meet specific learning and/or behavioral needs will be presented. Students will learn about the history of serving children and youth with mild to moderate disabilities associated with specific learning, emotional/behavioral, mild mental retardation and a range of physical and health needs. Key individuals in the research 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. Learning characteristics will be addressed in relation to why and how specialized instruction can meet the learning and developmental needs of these individuals, specifically...
Special Education

in the areas of instructional and assistive technology. Prerequisite: An introductory course in special education/exceptional children and youth. LEC

SPED 732 Characteristics of Students Needing a Functional Curriculum (3). This introductory course provides an overview of the characteristics of learners with significant support needs. Students will learn to define and understand various classification systems and the implications for significant cognitive disability; various sensory and/or hearing impairments, including deaf-blindness; motor disabilities, and health impairments. Students will be introduced to etiological perspectives: pre-, per- and post-natal causes, syndromes and chromosomal disorders, and biomedically caused severities of severe disability. Additional content includes: anatomy of sensory organs, interpretation of pertinent medical reports, assistance procedures, and treatments provided in school settings for orientation and mobility, cochlear implant, medications, tube feeding, PT, OT. Prerequisite: An introductory course in special education/exceptional children and youth. LEC

SPED 735 Characteristics of Exceptional Children and Youth: (3). Social, cognitive, emotional, and other developmental aspects associated with children/young people with learning disabilities, behavior disorders, and mental retardation are covered by this course. Characteristics, special needs, and service delivery approaches are compared and contrasted. Prerequisite: SPED 425 or SPED 725. LEC

SPED 741 Methods: Academic Instruction for Students with Exceptionalities in General Education and Learning Center Settings (3). This course is an introductory methods course for individuals seeking licensure in Adapted or Functional Special Education. The course will address how to develop and write Individualized Educational Plans. Students will learn about planning instruction that is differentiated to meet multiple student needs, universal design principles, practices, meaningful assessment to general education classrooms and curriculum for students with exceptionalities and designing and delivering appropriate accommodations and modifications to assist student learning. Further attention will be given to instructional strategies for supporting the development of literacy in reading and math. Prerequisite: SPED 631 or SPED 632 or SPED 731. LEC

SPED 742 Methods: Life Skills and Community Based Instruction (3). This course will provide an overview of assessment and instructional practices contributing to community referenced planning, community based instruction, and life skills instruction. Students will: learn to conduct ecological inventories and other student referenced assessments leading to the design and implementation of community based instructional and classroom curricular programs that appropriately and age appropriate curricular content, focusing on skills essential for community and social inclusion. Emphasis will be placed on instructional strategies and alternative delivery options in the sensory and motor areas, incorporating related services into inclusive educational settings. Special emphasis on adaptation of materials and methods of teaching science, math, social studies, spelling, and writing. Prerequisite: SPED 710. LEC

SPED 741 Methods: Academic Instruction for Students with Exceptionalities in General Education and Learning Center Settings (3). This course is an introductory methods course for individuals seeking licensure in Adapted or Functional Special Education. The course will address how to develop and write Individualized Educational Plans. Students will learn about planning instruction that is differentiated to meet multiple student needs, universal design principles, practices, meaningful assessment to general education classrooms and curriculum for students with exceptionalities and designing and delivering appropriate accommodations and modifications to assist student learning. Further attention will be given to instructional strategies for supporting the development of literacy in reading and math. Prerequisite: SPED 631 or SPED 632 or SPED 731. LEC

SPED 742 Methods: Life Skills and Community Based Instruction (3). This course will provide an overview of assessment and instructional practices contributing to community referenced planning, community based instruction, and life skills instruction. Students will: learn to conduct ecological inventories and other student referenced assessments leading to the design and implementation of community based instructional and classroom curricular programs that appropriately and age appropriate curricular content, focusing on skills essential for community and social inclusion. Emphasis will be placed on instructional strategies and alternative delivery options in the sensory and motor areas, incorporating related services into inclusive educational settings. Special emphasis on adaptation of materials and methods of teaching science, math, social studies, spelling, and writing. Prerequisite: SPED 710. LEC

SPED 743 Methods: Positive Behavior Support and Classroom Management (3). A problem solving approach provides the framework for teaching and assessment strategies to develop pro-social behavior in students with disabilities and their non-disabled peers in inclusive and whole school contexts. Students assess problem behavior, discover the functions of problem behavior and learn to teach pro-social alternatives in school, and community settings. Prerequisite: SPED 631 or SPED 731, and SPED 632 or SPED 732. LEC

SPED 751 Application of Assessment Information in Planning for Students with Needs for an Adaptive Curriculum (3). This course is designed for teachers seeking the adaptive license to teach students with mild to moderate disabilities. Teachers will learn how to select, administer, score, and interpret formal and informal measurements in order to make a variety of instructional decisions for students with specific learning disabilities, social and emotional needs and disorders in behavior, mild mental retardation, and/or who experience other health impairments. Individually chosen and administered tests as well as high stakes tests created at the state and national level will be discussed. Prerequisite: SPED 631 or SPED 731. LEC

SPED 760 Education of Exceptional Children and Youth I: (2). Presents basic methods and strategies for teaching individual children in classroom settings. Includes the development and implementation of individual education programs (IEP), the design of individual teaching programs, the arrangement and adaptation of learning environments, the adaptation of training materials, management of child behavior, and evaluation of child performance. Prerequisite: SPED 425 or SPED 725, and SPED 735 which can be taken concurrently. LEC

SPED 772 Participation with Exceptional Children and Youth: (3). A course designed to provide experiences for students to participate with exceptional children in public schools and/or residential facilities and with professional personnel associated with the lives of exceptional students including special education teachers, child care workers, therapists, etc. Students will have opportunities to participate as aides, tutors, and interactors with individual and small groups of exceptional youth in one or more placements. Through weekly meetings with the instructor students are guided to relate their experiences to the needs and services for exceptional children and youth. Prerequisite: SPED 775 which may be taken concurrently. LEC

SPED 775 Practicum with Exceptional Children: (1-10). Intensive work and direct teaching experiences with exceptional children and youth in educational settings. Prerequisite: SPED 760, SPED 740, or to be taken concurrently with either course. LEC

SPED 798 Special Course: (1-5). A special course of study to meet current needs of education professionals; primarily for graduate students. LEC

SPED 804 Designing Online Instruction for E-Learning Environments (3). The focus of the course is on the status of e-learning at the post-secondary and K-12 levels and the process of developing content for e-learning environments. Attention will be given to design features, the structuring of content, instructional management, evaluation, and the process of working with technicians in the process of developing online instruction. (Same as T&L 804.) Prerequisite: No specific course prerequisites. However, a background in education at some level is preferred. LEC

SPED 809 Methods of Teaching Speech to the Deaf I (3). An advanced course in the physical, acoustical, educational, and social aspects of speech development. Special emphasis is placed on the evaluation and planning of individualized speech programs for the deaf child. Prerequisite: SPED 709. LEC

SPED 810 Methods of Teaching Language to the Deaf II (3). Focus is on an in-depth experience with a specific system for teaching language to the hearing impaired. Special emphasis on adaptation of materials for use by hearing impaired individuals who have specific language problems. Prerequisite: SPED 809. LEC

SPED 811 Methods of Teaching Elementary School 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 in general education classrooms, problems, trends and procedures used in career education specifically for the hearing impaired. Prerequisite: SPED 711. LEC

SPED 841 Advanced Methods: Learning Strategies and Content Enhancements (2). This course is designed to prepare teachers to develop and implement instructional programs based on the principles of strategic instruction. Specific learning strategies and content enhancement teaching routines will be presented for students to evaluate and implement in classroom settings. The focus will be on the implementation of interventions that will help students participating in general education classrooms to gain the strategies necessary to acquire, store, and express information, demonstrate competence, and interact with others to meet the demands faced in school, home, community, and employment settings. In addition, teaching routines that facilitate strategic learning of information during content area instruction that compensates for students' inefficient and ineffective strategies will be introduced, evaluated, and implemented in classroom settings. Course content will focus on learning how to select learning strategies that match student needs from published curricula as well as how to collaboratively create learning strategies with youth to meet their 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 will learn assessment techniques and instructional strategies for teaching learners with sensory and/or motor impairments and complex medical needs. Students will learn assessment techniques and instructional strategies and alternative sense; safely and properly position and transfer learners with motor impairments; and monitor learners' nutrition, hydration, medication, and seizure activity. Writing appropriate goals and objectives in the sensory and motor areas, incorporating related services into inclusive educational settings, embedding sensory and motor skills' training in the general education curriculum, adapting materials and instruction, as well as applying assistive technologies will be addressed. Prerequisite: SPED 632 or SPED 732, and SPED 742. LEC

SPED 843 Advanced Methods: Strategies for Students with Significant Behavior, Social, and Emotional Needs (2). This course is designed to introduce teachers to intervention related to a broad range of antisocial, aggressive, and violent behavior. Approaches investigated will focus on understanding and addressing the precipitating factors related to such behavior as well as short-term approaches for weathering immediate crises and how to build needed coping skills. Long-term change strategies for long-term change. Course content will include investigation of various types of antisocial, aggressive, and violent behavior, recognition, school- and system-oriented interventions, system-oriented interventions, and the ethical and legal issues involved in various prevention and intervention approaches. Special attention will be given to exploring issues related to reducing school violence. Enabling the development, exploration of the literature in each area, exploring research-based intervention approaches, and investigating case vignettes illustrating specific approaches and programs. Prerequisite: SPED 631or SPED 731, SPED 741, and SPED 743. LEC
SPED 844 Advanced Methods: Nonsymbolic and Symbolic Communication Assessment and Augmentation Strategies (3). This advanced course examines current principles and practices in the development of multimodal communication programs for learners who do not spontaneously use speech for effective communication. It provides a framework upon which most, if not all, communication programming decisions can be based and tools and strategies for putting those decisions into action. Prerequisite: SPED 632 or SPED 732, and SPED 742. LEC

SPED 851 Law and Special Education (3). This course focuses on laws that apply to special education. The American legal system, particularly in respect to special education, the constitutional and statutory provisions of federal and state law, and the judicial decisions interpreting those laws are examined. The course relates equal protection, procedural due process, and substantive due process doctrines to school practices affecting disabled children and examines the six principles of P.L. 94-142 and similar principles in state legislation. This course is not the equivalent of or a substitute for T&L 752. (Same as T&L 856.) Prerequisite: SPED 750 or permission of instructor. LEC

SPED 852 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, and advocacy, medical assistance, employment, vocational rehabilitation, and others). Not valid for core requirement in history and/or philosophy of education. (Same as T&L 852.) Prerequisite: SPED 851 or SPED 720 or permission of instructor. LEC

SPED 853 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, attitudes, and rules of law. The issues include, without limitation, education, treatment, and nonrecourse requirement in history and/or philosophy of education. (Same as T&L 858.) Prerequisite: SPED 750, SPED 850, SPED 852 or permission of instructor. LEC

SPED 854 Interprofessional Collaboration (3). This course is designed to provide knowledge and skills to implement federal and state mandates for special education and related services programs. It will cover procedures for developing, implementing, and evaluating (a) instructional accountability for both the individual student and special education personnel, (b) participation in district and state assessments, (c) relationships between general and special education personnel and programs, (d) interdisciplinary team planning including parents, (e) coordinating, training, and supervising paraeducators, and (f) general management responsibilities associated with instruction of children and youth with exceptionalities. Prerequisite: SPED 631 or SPED 731, or SPED 632 or SPED 732, or SPED 735. LEC

SPED 855 Family and Community Systems (3). This course is designed to introduce students to the literature, theory, practice, and application of developing successful relationships between parents/families of children with disabilities and the school community. Course topics will include family involvement in the child’s development, the historical perspective of family life and parent/family involvement, building effective relationships between home/community and school, communication and parent/family programs, collaborative leadership and working with families, school-based programs, and working with parents/families of children with diverse disabilities. Prerequisite: SPED 631 or SPED 731, or SPED 632 or SPED 732, or SPED 735. LEC

SPED 856 Transition Education and Services from Childhood through Adulthood (3). The purpose of this course is to provide a background in career development and transition education for persons with disabilities from the middle school years to adulthood. Emphasis is placed on the IDEA requirements for transition services, the nature of career development and transition processes, assessment of transition service needs and needed services, the curricular implications of career development and transition service needs, collaborative services in schools and communities to promote and sustain quality transition services, and issues and trends in delivering transition education and services. LEC

SPED 857 Vocational Training and Employment (3). The purpose of the course is to provide graduate students in special education and related areas who are specializing in secondary school/transition programs with an overview of employment and vocational models for adolescents and young adults with disabilities. Emphasis is placed upon the theory and practice related to career development, supported employment, working with businesses, and school and community vocational training models. Prerequisite: SPED 856 or SPED 632. LEC

SPED 858 Assessment for Transition Planning (3). This course is designed to provide a review of psychometric principles and their utility as a foundation for quality assessment in transition assessment and planning for youth with disabilities. Formal and informal assessments across a range of settings and areas are reviewed and overviewed. Skills in curriculum-based assessment, rating scales, situational assessment, and functional assessment are emphasized. Prerequisite: SPED 856 or permission of instructor. LEC

SPED 859 Interagency Services for Transition to Adulthood (3). The purpose of this course is to provide graduate students in special education and related areas who are specializing in secondary school/transition programs an overview of interagency and community services and systems for adolescents and young adults with disabilities. Emphasis is placed on theory and practice related to interagency collaboration; systems change efforts in transition services; and state-of-the-art practices regarding supporting individuals with disabilities in community employment, living, socialization, and participation in family life and other areas of community adult life. Prerequisite: SPED 856. LEC

SPED 860 Education of Exceptional Children and Youth II: _____ (3). Emphasis on skills necessary to implement specialized alternative strategies for individualized group instruction. Focuses upon methods for developing and implementing overall treatment/educational programs, planning or selecting curriculum/service models for programs serving exceptional children and youth, and developing instructional materials. Also includes procedures for (a) managing classroom staff and service resources, (b) coordinating educational programs with parents, other service personnel and program support staff, and (c) ensuring overall program effectiveness. Prerequisite: SPED 780. LEC

SPED 875 Practicum with Exceptional Children and Youth: _____ (1-10). Intensive work and direct teaching experiences with exceptional children and youth in educational, residential, or clinical settings. Prerequisite: SPED 740, SPED 760, SPED 775. LEC

SPED 880 Coordination and Supervision of Services for Exceptional Children (3). An analysis of the role of the special education coordinator and supervisor. Particular attention will be given to: program development; planning, organizing, and delivering in-service training; personnel recruitment, selection, and evaluation; program management; and program evaluation. Students will relate the topical content to their specific area of expertise in special education. Prerequisite: SPED 425 or SPED 725 and six additional semester hours in special education. LEC

SPED 890 Interdisciplinary Programming for Exceptional Children and Youth (3). Survey of disciplines which contribute to the care and treatment of exceptional children and youth. Emphasis on professional roles, team participation, reporting, case management, and follow-up. Disciplines involved include medicine, education, audiology, psychology, speech pathology, occupational therapy, physical therapy, music therapy and social work. Prerequisite: SPED 425 or SPED 725. LEC

SPED 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

SPED 899 Master’s Project (1-4). RSH

SPED 899 Master’s Thesis (1-6). RSH

SPED 915 Advanced Curriculum Development for Exceptional Children and Youth (3). Principles of development, needs assessment, evaluation and dissemination applied to curriculum products. Analysis of the organizational and conceptual features of major curriculum development projects for exceptional students. Examples of designing curriculum procedures. Prerequisite: Twelve semester hours in special education and a general curriculum course. LEC

SPED 925 Medical Aspects of Handicapping Conditions (3). The organization of this course follows the chronology of development from genetic origin through fetal development, perinatal, infancy, childhood, and adolescence. Emphasis is given to etiology and implications of handicapping conditions on development. Attention is also given to prevention, treatment, and habilitation or rehabilitation of handicapping 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 the professions and society in a democracy, and specifically with the form of professional ethics and practice associated with the professions of education, special education, and other disability-related fields. This and other models of professionalism are compared and the advantages of civic professionalism for individuals with disabilities and their families, the professions, and society as a whole are explored. Lessons are drawn from disagreements over questions such as the nature and social consequences of research 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 field of exceptionality. Separate sections will be organized for each area of exceptionality such as mentally retarded, and emotionally disturbed. 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 Exceptional Children (3). To aid administrators and prospective administrators responsible for organizing and administering educational programs.
Teaching and Leadership

Chair: John Rury
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 421
Lawrence, KS 66045-3101, (785) 864-4435
www.soe.ku.edu/tl

Professors: Bushman, Capps, Erb, Hillesheim, Hiner, Imber, McKnight, Mahllos, Rury, Twombly
Professors Emeriti: LaShier, Lindley, Noyce, Ridgway, Schild, Smith, Sundbye, Swartz

Courtesy Professor: Carlsen

Associate Professors Emeriti: Hughes, Richardson
Assistant Professors: Gonzalez-Bueno, Huffman, Massengill, Smith, Thomas, Wyatt

Courtesy Assistant Professor: Surbaugh

The Department of Teaching and Leadership offers a broad range of professional programs in curriculum and instruction and in educational policy and leadership. Students should contact the appropriate program adviser for specific program requirements.

For complete program information, write to the department at the address above.

Note: Degree requirements are subject to change. Prospective and current students should obtain the current degree requirements from the department.

Submit your application to the Graduate School online at www.gradeuate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Curriculum and Instruction Programs

Programs in curriculum and instruction prepare teachers at all levels. At the graduate level, this involves course work leading to initial licensure, the Graduate Licensure Program, and programs leading to the Master of Arts (M.A.) with a major in education and Master of Science in Education (M.S.Ed.), The Doctor of Education (Ed.D.) and Doctor of Philosophy (Ph.D.) with a major in education. Programs for students who plan to teach at the college level or assume major leadership positions in schools, e.g., assistant superintendent for curriculum and instruction. Academic concentrations are:

1. Foreign language education.
2. Language arts education.
5. Social studies education.
6. Reading.
7. Teaching English as a second language.
8. Middle-level education.
10. General curriculum and instruction.
11. Gifted and talented 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 most instances, a teaching license.

Materials describing all curriculum and instruction programs may be obtained from the department. All applications and materials for admission to graduate study in curriculum and instruction should be sent to the Graduate School. When admission materials are processed, the student is assigned an adviser according to the student’s interest. Deadlines for applications are generally March 1 for summer session, July 1 for fall semester, and November 1 for spring semester. Please check with the department; some programs have different deadlines. Each student should consult the assigned adviser during each enrollment and plan a program with the adviser at the first enrollment or promptly thereafter. A copy of this program should be filed in the student’s folder in the School of Education Graduate Division Office.

Admission to Master’s Programs. Minimum requirements are a completed graduate application and two official transcripts of all college records. Non-native speakers of English also need a Test of English as a Foreign Language score or a degree from an English-speaking university. Each program has slightly different requirements. Consult the department.
Admission to Doctoral Programs. Minimum requirements are a completed graduate application, two official transcripts of all college records, and:

1. Master's degree or equivalent with at least a 3.5 grade-point average on a 4.0 scale.
2. Graduate Record Examination general test scores (successful candidates normally have scores of at least 500 on the verbal and 500 on the quantitative sections).
3. Statement of career goals: how this degree will help meet professional aspirations and areas of interest in curriculum and instruction.
4. Letters of reference from three persons including the master's thesis adviser, if applicable.
5. An article, paper, or other composition written by the applicant.
6. For non-native speakers of English, a degree from an English-speaking university or a TOEFL score.

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 options may be obtained from the department.

Educational Policy and Leadership Programs

Graduate programs in educational policy and leadership promote the professional and intellectual development of practitioners, teachers, and scholars in this field at all levels of education. The department offers Master of Science degrees in educational administration (K-12), foundations of education, and higher education, as well as Ed.D. and Ph.D. degrees in educational policy and leadership.

Admission. Applicants for all programs must submit the following materials:

1. Graduate School application form.
2. Two official transcripts from each collegiate institution attended.
3. Original Graduate Record Examination general test scores (Ed.D. and Ph.D. in all concentrations and master’s in educational administration). Applicants for the Ed.D. with a concentration in educational administration and for the master’s degree in educational administration may submit scores on the Miller Analogies Test in lieu of GRE scores.
4. Statement of career goals.
5. Three letters of recommendation evaluating the applicant’s capacity for rigorous graduate study and qualifications for leadership positions in education and related fields.

Individual program concentrations may require additional application materials. Please consult the appropriate program adviser. The following application deadlines apply:

<table>
<thead>
<tr>
<th>Program</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S. in educational administration</td>
<td>March 1</td>
</tr>
<tr>
<td>M.S. in higher education</td>
<td>March 1</td>
</tr>
<tr>
<td>M.S. in foundations of education</td>
<td>November 1, March 1, July 1</td>
</tr>
<tr>
<td>Ph.D. and Ed.D. concentrations:</td>
<td></td>
</tr>
<tr>
<td>Educational administration</td>
<td>November 1, March 1, July 1</td>
</tr>
<tr>
<td>Higher education</td>
<td>March 15 and October 15</td>
</tr>
</tbody>
</table>

All students planning to pursue programs leading to licensure as building or district-level school administrators must begin course work in the summer (March 1 application deadline).

Master's Degree Programs in Educational Policy and Leadership

The master's program in educational administration prepares graduates for positions of public school leadership 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 historical, philosophical, and sociological foundations of the U.S. educational system. Please refer to the appropriate program brochure for information about requirements for each master's degree.

Doctoral Programs in Educational Policy and Leadership

The Ed.D. trains educational practitioners to understand and apply the most advanced knowledge to their work. The Ph.D. prepares scholars to contribute to the field through 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 in a combination of two areas.

A general description of each concentration is given here. Request the program brochure for each area for specific information on courses and requirements.

Educational Administration. The educational administration concentration prepares teachers and administrators for leadership roles in school settings. Studies in this concentration stress fundamental fields of knowledge and educational policy development necessary for effective leadership of elementary and secondary teachers and their schools.

Foundations of Education. The foundations of education area promotes educational leadership through the broad examination of educational theory and its practical application on a local, national, and international level. 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 in this area are flexible and reflect the particular needs and aspirations of each student. The multidisciplinary aspect of the program is reflected in specialized course and seminar offerings. The foundations area includes exposure to Western and Eastern philosophies of education, educational theory, history of education, and comparative and international education.

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 and the complex human activity. The program in higher education includes studies in the concentration, in statistics and research, in a cognate area (Ph.D.), and in practicum or field research (Ed.D.), as well as in core requirements for the doctorate.

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 department.
Teaching & Leadership

- Teaching and Leadership Courses
  T&L 500 Student Teaching in: _____ (1-6).
  T&L 501 Student Teaching Practicum in: _____ (5-16).
  T&L 550 Childhood and Youth in America (3).
  T&L 598 Special Course: _____ (1-5).
  T&L 615 Teaching English as a Second Language/Bilingual Education (3).
  T&L 616 Diagnosis and Remediation in Second Language Education (3).
  T&L 617 Second Language Acquisition (3).
  T&L 644 Understanding the Nature of Talent in Children and Youth (3).
  T&L 645 Teaching for Talent Development (3).
  T&L 652 Residential Staff Skill Enhancement and Administration (2-3).
  T&L 700 Teaching with Community, Contemporary, and Primary Resources (3).
  A practical course designed for grades 4-12 teachers who wish to utilize community-based, mass media, and/or primary resources. The course focuses on the use of community resources such as local historical societies, museums, and government agencies; on the use of mass media such as newspapers, magazines, organizations’ newsletters, television, and film; and on the use of primary resources such as artifacts, documents, recordings, and oral historians. Participants receive sample resources from each of the three areas along with accompanying activities. LEC

T&L 701 Social Studies in the Elementary School (3). A study of the purpose, content, psychology, and materials in teaching social studies in grades K-8. Emphasis will be placed on developing teachers as effective leaders for teaching the social sciences in the elementary school. LEC

T&L 702 Economic Education (2-3). An examination of the concepts, theories, and resource materials utilized in teaching economics in the K-12 curriculum. Particular attention is given to the functional integration of economic concepts into the elementary and secondary social studies curriculum. The use of economic resource material is considered. Participants develop projects for use in their own classrooms. LEC

T&L 703 Curriculum Development in Economic Education (3). Extension and application of economic concepts and theories through integration into the scope and sequence of the school curriculum. The course will include the development of a project that utilizes appropriate concepts, materials, community resources and techniques for integrating economics into the total curriculum. Prerequisite: T&L 702. LEC

T&L 704 Teaching Economics in: _____ (3). A critical analysis of the relationship between economic and a designated school subject selected from history, geography, or consumer education; a determination of the economic concepts that can be appropriately integrated into the particular discipline and a comprehensive search of the particular curriculum area to identify the most effective and efficient points at which the economic concepts can be integrated. Prerequisite: T&L 702. LEC

T&L 705 International Issues in the K-12 Curriculum (3). An examination of current international topics and issues from an economic education perspective. Special emphasis is given to effective integration of global topics and issues into the curriculum at both elementary and secondary levels. Students survey and analyze economic education resource materials and develop international lessons for use in their own classrooms. This course is offered during summer term, locally, and as a study abroad option. This course has been offered two times previously as T&L 705—summer 1995 at the Regents Center and in Great Britain. LEC

T&L 706 Social Studies in the Middle School (3). The purpose of this course is to offer 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 the developmental characteristics of early adolescence; (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 capture their imaginations for active, responsible citizenship. LEC

T&L 707 Social Studies in the Secondary Schools (3). The purpose of the course is to offer preservice and practicing K-12 social studies educators the following: (1) an overview of theoretical bases for social studies education; (2) a review of the major curriculum and extracurricular K-12 social studies programs; (3) strategies for the design, implementation, and evaluation of social studies programs; and (4) experience with the design, implementation, and/or evaluation of a social studies program. LEC

T&L 708 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

T&L 709 Teaching and Learning Social Studies: (Geographic Concepts) (3). The course Geographic Concepts, is grounded in geography content, skills, and perspectives contained in the national standards, and is structured around the five fundamental themes of geography. The focus of this course is to provide teachers with a conceptual basis for learning and teaching geography, as well as enhancing opportunities for disseminating solid geography content to all grade levels. LEC

T&L 710 Social Studies Programs in the K-12 Curriculum (3). The purpose of the course is to offer preservice and practicing K-12 social studies educators the following: (1) an overview of theoretical bases for social studies education and its social studies and discipline specific curriculum standards; (2) a review of the major curriculum and extracurricular K-12 social studies programs; (3) strategies for the design, implementation, and evaluation of social studies programs; and (4) experience with the design, implementation, and/or evaluation of a social studies program. LEC

T&L 711 Teaching Native Americans in: _____ (1-3). Research-based practices for teaching American Indian students in mathematics, science, reading, or another designated subject area with particular attention to cultural relevancy and learning needs of this population. May be repeated in different subject area. Prerequisite: Admission to graduate or undergraduate program. LEC

T&L 715 The Writing Process: National Writing Project Model (2-3). Inservice teachers, K-12, will study and participate in the writing process (prewriting, composing, revising, editing, proofreading, and publishing). The class format will be lecture, discussion, demonstration, and writing. Trained teacher/consultants selected by the instructor from project-sponsored programs will present successful approaches to improving the quality of writing in the demonstration phase of the course. LEC

T&L 716 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 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, assessment, and instruction. LEC

T&L 717 Reading Strategies for Expository Text (3). A study of the need of teaching reading in content areas, factors involved in the reading process, and basic and advanced reading and study skills to be taught. Teachers may concentrate upon the study of ways of teaching reading in one or more of the following: language arts, social studies, sciences, mathematics, art, music, home economics, industrial arts, business education, or physical education. Administrators may study how to organize and administer a developmental reading program focusing on expository text. Prerequisite: Nine hours of Education including educational psychology. LEC

T&L 718 Teaching Writing and the English Language (3). The study of modern procedures of secondary school instruction in the English language and composition. Emphasis is given to the following areas: the teaching of language topics in the secondary curriculum, e.g., the heritage of English, geographical and social dialects of English, usage in language, the nature of language, making modern English grammar functional in the English classroom; the relationship of grammar teaching to oral and written composition; and general approaches to the teaching of writing in the secondary school. LEC

T&L 719 Teaching Young Adult Literature (Grades 7-12) (3). A study of the characteristics of adolescents with respect to their interest and reading habits; criteria for choosing books for junior and senior high school in-class and out-of-class reading; selection of materials; methods for helping poor readers; literacy discrimination and appreciation; censorship; ethnic literature; techniques for presenting literary selection in class. Wide reading among best of current and classical literature. LEC

T&L 720 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 process and instruction, and strategies for integrating the language arts. Prerequisite: Admission to a masters program within the School of Education, T&L 716, or permission of the instructor. LEC

T&L 721 Comprehension and Study Strategies for Use with Multiple Texts (2). It is the purpose of this course to explore research, theory, and practice in reading comprehension. Emphasis is placed on the application of strategies for various text types (expository, narrative, persuasive, and technical) for teaching reading comprehension and study...
skills across content areas in the K-12 classrooms. Prerequisite: T&L 716 or permission of the instructor. LEC
T&L 722 Teaching Literature to Children (3). An opportunity to survey the broad range of trade books published for children; criteria for book selection; children’s reading interests and tastes; illustrations of children’s books; sources for selecting literature; poetry; the role of children’s literature in today’s elementary curriculum. LEC
T&L 724 Language and Literature in the Reading Program (3). A study of linguistic and literary aspects of reading instruction, focusing on language and cognitive development as they relate to reading. Emphasis will be on approaches for differentiating reading instruction to provide for less proficient to gifted readers, research and issues related to reader response, techniques for assessing children’s reading attitudes and interests, procedures for selecting literature, and strategies for integrating literature into the elementary school reading program. Prerequisite: T&L 716 or permission of instructor. LEC
T&L 725 Emergent Literacy and Beginning Reading (3). A study of the characteristics of diagnostic and remedial teaching. Students will become acquainted with diagnostic and remedial procedures, special materials, and evaluative devices that can be used with remedial or corrective reading programs conducted in a public school setting. Prerequisite: T&L 716 and/or consent of instructor: LEC
T&L 726 Intervention for Beginning Readers—Practicum (2). A case study approach to the instruction of children in need of early intervention in reading. Requires assessment, instruction, and case reports of tutored children. Prerequisite: T&L 716, T&L 720, T&L 721, T&L 724, T&L 725, or permission of instructor. LEC
T&L 727 Developing Assessment and Instructional Plans for Students with Reading Difficulties (2). A study of the characteristics and multiple causes of reading and writing difficulties, principles and procedures for diagnosis and remediation of reading difficulties, basic skills needed to provide individual and group intervention strategies, diagnostic information, and gain awareness of the impact of research on instructional decision-making for students with reading difficulties. Prerequisite: Admission to a masters program within the School of Education, T&L 716, T&L 720, T&L 721, and T&L 724, or permission of instructor. LEC
T&L 728 Practicum for Students with Reading Disabilities: Pre-Adolescent through Adult (3). Case study approach to the treatment of the pre-adolescent through adults with reading disabilities. Requires diagnostic testing of the learner, compilation of case study reports, and participating in staffings 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, T&L 716, T&L 720, T&L 721, T&L 724, T&L 727, or permission of instructor. LEC
T&L 729 Introduction to Computing in Education (3). This course introduces basic concepts of computer literacy, with particular emphasis on the uses of multimedia in educational settings. Topics include an overview of computing applications and the impact of computers on society, an introduction to computer hardware and associated concepts, introductory programming concepts, a survey of instructional and interpersonal applications of computers including examples of related software, software evaluation techniques, and an overview of resources of educational computing. Students will acquire hands-on operational experience with microcomputers through scheduled laboratory periods. (Same as SPED 729.) LEC
T&L 730 Educational Media Development (3). This course will explore: (1) educational media development from various theoretical and instructional viewpoints; (2) the role of media (TV, radio, print, etc.) in the development of instruction; (3) new media formats (computer-based multimedia, streaming video, Internet-based media, etc.); and (4) current and future trends in technology development and use. Students will gain a thorough understanding of the impact of technology on the development of effective models of instructional delivery in educational settings. Each student will have the opportunity to design and produce an original working model of instruction. Prerequisite: Admission to the School of Education and successful completion of T&L 400, T&L 729, or equivalent experience with instructor’s permission. Prospective students should have access to a personal computer and Internet access. LEC
T&L 731 Design of Instructional Materials (3). Introduction to the systematic design and production of instructional resources. Emphasizes the theories of instructional design and mediated instruction. Utilizes various delivery systems, including computers and video as well as traditional media. Although this course is practically oriented, it includes theoretical readings designed to provide a principled underpinning to instructional design. Prerequisite: T&L 601. LEC
T&L 732 Science in the Elementary School (3). Survey of concepts and processes that provide the focus of modern elementary science curricula. Provides a broad background for understanding and/or teaching an adopted science program or developing a unique program. LEC
T&L 733 Mathematics in the Elementary School (3). A study of recent changes in elementary mathematics instruction and content and their rationale. Specific emphasis is given to changes recommended by the national Council for Teachers of Mathematics and other professional groups. For teachers and principals who desire background for current instructional materials in elementary mathematics. Prerequisite: Teaching experience or permission of instructor. LEC
T&L 734 Integration of Instruction in the Elementary School (2). A study of the rationale for correlation instruction in language arts, reading, math, science, and social studies and practical strategies for integrating instruction throughout the elementary school curriculum. LEC
T&L 735 Instructional Strategies in: (2). The three phases of the course include discussion of issues associated with the first year of teaching, review of existing professional materials in the content area, and development of individual project plans in curriculum to be implemented during internship. LEC
T&L 736 Analysis of Teaching and Learning in: _____ (2). LEC
T&L 737 The Governance and Organization of Schools (2-3). This course provides the prospective teacher with an overview of the following topics: 1) 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
T&L 739 Internship in Teaching: _____ (1-15). A supervised internship experience leading to initial certification. The student assumes the total professional role as a teacher in an approved classroom setting, with level and subject area to be selected according to the teaching field. Prerequisite: T&L 500 and T&L 736 appropriate to the student’s teaching level area and, or equivalent. LEC
T&L 740 Foundations of Curriculum and Instruction (3). Basic concepts and processes of curriculum and instruction, including theories, planning models, resources for decision-making, current trends, research, and proposals for improvement of curriculum and instruction. LEC
T&L 741 Introduction to Middle Level Education (3). Designing educational programs appropriate for early adolescent learners is the focus of this course. Such topics as interdisciplinary team organization, advisory programs, exploration, curricular balance, and the role of the middle grades in a K-12 sequence will be emphasized. LEC
T&L 742 Planning for School Improvement (2-3). The course will emphasize the latest research and practice related to school improvement. Students will function as a member of a school improvement team to assimilate and synthesize research and practice into the development, revision, and/or assessment of a school improvement plan for a specific school site. Corequisite: Enrollment in the summer institute on school improvement. LEC
T&L 743 Multicultural Education (3). In order to provide the student with an understanding of multicultural education, the course will examine the effects of such issues as ethnicity in America, the melting pot theory, separation, cultural pluralism, legal issues, and bilingual education upon the curriculum and instruction in today’s classrooms. It will include an evaluation of materials for bias and stereotypes. Field experiences are a part of this course. LEC
T&L 744 Understanding the Nature of Talent in Children and Youth (3). This course addresses the social, cognitive, affective, and other developmental aspects of talent as manifested in children and youth with high potential. The course provides an opportunity to examine characteristics, strengths, and needs of these children and their families. The course focuses on the foundational aspects of gifted/talented education: educational and political history of the field, etiology of extraordinary potential, and identification and assessment techniques, instruments, and systems. Included in the course are relevant research, policies and regulations, services, and information resources. Prerequisite: SPED 425, SPED 424, SPED 725, or equivalent introductory course on exceptional children and youth. LEC
T&L 745 Teaching for Talent Development (3). The course introduces key theories and basic principles of curriculum development and introduction for students with high potential and/or high achievement. Frameworks and models for modifying general education content, cognitive processes, and learning outcomes are applied to enhancing talent development. The course addresses affective considerations, peer relations, and working with families. Prerequisite: T&L 644, T&L 744, or equivalent course. LEC
T&L 746 Teaching for Talent in General Education Settings (3). This course is for classroom teachers concerned about meeting the needs of students with high potential in their classrooms. Students will be introduced to various curriculum models and teaching strategies commonly employed in special programs for gifted/talented students. There will be opportunities to apply gifted education models to modify existing curriculum or develop new curricula which enhances the abilities of all students. Prerequisite: T&L 644 or T&L 744 or equivalent introductory course on exceptional children and youth. LEC
Teaching & Leadership

T&L 747 Practicum in Gifted and Talented Education (1-10). A course designed to provide experiences for students to work intensively and to teach identified gifted and high potential students in educational settings. Students will develop competencies relative to implementing individual group and individual education plans through a variety of instructional alternatives. Arranged service delivery options are possible. Prerequisite: T&L 645, T&L 745, T&L 746, or equivalent course. LEC

T&L 748 Applied Research in the Classroom (2). This course is designed to facilitate the implementation and completion of an action research project during the internship experience. LEC

T&L 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

T&L 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 principles of revenue acquisition 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 levels. Prerequisite: Admission to graduate study. LEC

T&L 752 Education Law (3). A study of legal principles and issues affecting educational policy and practice with emphasis on student and teacher rights, equity, and the administration of schools. Prerequisite: Admission to graduate study. LEC

T&L 753 Introduction to Personnel Administration in Education (3). An overview of the theory and practice of personnel administration and responsibilities of major administrative divisions of a college or university and to the major tasks of administration: planning, programming, budgeting, staffing, and decision making. 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 one or more administrative offices on a college campus. Prerequisite: Admission to study in higher education at the graduate level. LEC

T&L 781 Student Affairs Administration in Higher Education (3). This course is designed to provide the study of the administration of student personnel services in higher education, the role and function of the student affairs administrator, comparative 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

T&L 797 Special Project in: ______ (2). Implementation of the curriculum project planned in T&L 610 or T&L 611, including the assessment of the special project will occur during the internship. Prerequisite: T&L 610, T&L 611, and T&L 612. RSH

T&L 798 Special Course: ______ (3-5). A special course of study to meet current needs of education professionals—primarily for graduate students. LEC

T&L 800 Problems in Social Studies Instruction (3). A study of problems relating to, and needed changes in the content, organization, emphasis, resources and equipment, methods, devices and evaluation of the social studies. Consideration of related problems such as achieving meaningful and understanding, providing for individual differences, providing motivation, the cooperative assignment and socialized recitation. Students will be permitted to concentrate on the problems of particular interest to them. Prerequisite: Nine hours of Education including educational psychology. LEC

T&L 804 Designing Online Instruction for E-Learning Environments (3). The focus of the course is on the status of e-learning at the post-secondary and K-12 levels and the process of designing content for e-learning applications. Attention will be given to design features, the structuring of content, instructional management, evaluation, and the process of working with technicians in the process of developing online instruction. (Same as SPED 804.) Prerequisite: No specific course prerequisites. However, a background in education at some level is preferred. LEC

T&L 815 Teaching English as a Second Language/ Bilingual Education (3). The purpose of this course is to study the objectives and methods of ESL/Bilingual education. Students will examine methods and techniques of teaching: listening, speaking, reading, and writing in the ESL/Bilingual Education setting. The course will also emphasize the importance of culture in second language teaching, and self-evaluation of teaching and instructional materials. Prerequisite or Corequisite: T&L 740. LEC

T&L 816 Diagnosis and Remediaiton 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 normal second language development in the area of listening, speaking, reading, and writing in the ESL/Bilingual Education setting. The course will also emphasize the importance of culture in second language teaching, and self-evaluation of teaching and instructional materials. Prerequisite or Corequisite: T&L 740. LEC
T&L 818 Problems in Second Language Instruction (3). This course presents a study of curricula and instruction in the second language setting at all levels with emphasis on educational research concerning these issues. Particular attention is given to developing competency in locating and utilizing sources of information and to preparing the research document. The course facilitates practical problem solving in the second language learning context. Prerequisite: T&L 815. LEC

T&L 819 Developing Intercultural Awareness in the Second Language Classroom (5). This course includes the study of the interrelationships of language and culture and the use of multicultural training techniques to develop cultural awareness and positive attitudes in the second language classroom. Emphasis is on the integration of culture in the second language curriculum. Prerequisite: T&L 815 or T&L 444. LEC

T&L 820 Practicum in Teaching English as a Second Language/ Bilingual Education (3). This course provides a supervised teaching experience in a setting appropriate to the goals of the prospective ESL/Bilingual teacher: elementary, secondary, or adult. Particular attention is given to lesson planning, classroom management, and the development of self-evaluation techniques. This course will also emphasize structured classroom observation prior to teaching and techniques for observing and maintaining positive working relationships with other professionals in the setting. Prerequisite: T&L 815, T&L 816, and T&L 817 or T&L 818. LEC

T&L 821 Problems in Language Arts Instruction (3). A study of pre-service curricula in junior and senior high school English and speech. Current thinking in grammar and usage; language development in oral and written communication; problems of teaching reading and literature in the junior and senior high school; construction and reorganization of language arts courses. Students will be permitted to make an intensive study of an individual problem relating to more effective instruction in the language arts. LEC

T&L 822 The Reading Program: Coordination and Supervision (3). An overview of the role of the reading coordinator/supervisor and that individual's responsibility for the components of a balanced reading program. Emphasis will be given to assessment of the reading program, strategies for change, improving the reading program, in-service programs, working with other personnel, providing services, and public relations. Prerequisite: T&L 716, T&L 730, T&L 721, T&L 724, T&L 725, T&L 726, T&L 727, and T&L 728. LEC

T&L 830 Practicum in Educational Communications and Technology (1-3). Supervised practice in a media center in selection, classifying, designing, producing, and/or managing instructional materials. Prerequisite: T&L 616 and T&L 731. FLD

T&L 831 Modern Approaches to Secondary School Mathematics (3). A study of aspects of curriculum and instruction in secondary school mathematics programs, including research on teaching and learning mathematics. Prerequisite: Teaching experience in middle- or high school mathematics or permission of instructor. LEC

T&L 832 Issues in Science Instruction (3). A study of science curriculum standards and exemplary programs; research on instructional strategies such as concept mapping, cooperative team learning, and inquiry models. Issues such as use of technology in the classroom and science-technology-society topics will be further developed through individual student projects. LEC

T&L 833 Diagnosis and Remediation in Elementary Mathematics (3). Deals with diagnostic techniques and instruments and with materials to remediate specific simple learning difficulties in elementary mathematics. Includes research dealing with learning difficulties and error analysis in elementary mathematics. Prerequisite: T&L 733. LEC

T&L 834 Practicum in Remedial Mathematics (2-4). Diagnostic and corrective teaching of a child or children classified as simple mathematical disability cases. An enrollment will be for two hours. May be taken twice. Prerequisite: T&L 833. FLD

T&L 835 Topics in Science Education: (1-3). A study of the curriculum and teaching approaches in a particular area of science education. The course may be repeated for different topics. Prerequisite: Admission to graduate study. LEC

T&L 836 Practicum in Science Education (1-3). Intensive supervised experience working with improvement of science curriculum and/or instruction in an instructional setting. Credit in any one semester may range from one to three hours; and total credit may not exceed three hours. Prerequisite: Two graduate courses in science education and prior consent of practicum supervisor. FLD

T&L 837 Practicum in Mathematics Education (1-3). Intensive supervised experience working with improvement of mathematics curricula and/or instruction in an educational setting. Credit in any one semester may range from one to three hours; and total credit may not exceed three hours. Prerequisite: Two graduate courses in mathematics education and prior consent of practicum supervisor. FLD

T&L 840 Instructional Strategies and Models (3). Analysis of models of teaching which represent distinct orientations to teaching and how they learn. The application of these models is complemented by the study of research evidence on effective teaching strategies. Prerequisite: T&L 740. LEC

T&L 841 Supervision of Field Experience (2). This course is designed for teachers interested in working as cooperating teachers for student teachers and interns. Topics include: the role and responsibilities of students in field experiences, the role and responsibilities of the cooperating teacher; formative and summative feedback; and mentorship. Prerequisite: Admission to the graduate school. LEC

T&L 842 Foundations of Curriculum Development (3). This course is designed for students to gain a functional understanding of the historical, philosophical, political, psychological, and cultural factors which affect the designing and implementation of curriculum at several levels: the individual classroom, the team, the school, the larger administrative unit, the state, and the nation. Prerequisite: T&L 740 or permission of instructor. LEC

T&L 843 Curriculum Planning for Educational Settings (3). A focus on organizing and managing curriculum development in educational settings. Such curricular decisions as writing philosophies, setting goals and objectives, selecting and organizing content, and designing and monitoring evaluation procedures will be emphasized. Providing leadership for the collaborative process of curriculum planning in organizational settings will receive attention. Prerequisite: T&L 740, admission to Building Principal Certification program, or permission of instructor. LEC

T&L 844 The Individualization of Instruction (3). The study and design of materials and programs to individualize instruction. Emphasis is given to modularized instruction, learning centers, learning packages, and various commercial programs. Participants will design and develop programs for their own teaching situations. A practical course for both elementary and secondary teachers. Prerequisite: T&L 740. LEC

T&L 850 Educational Facilities (3). A study of the principles and processes of developing functional educational facilities. Special emphasis placed on the 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 development of educational specifications. Designed for both building and central office level administrators. Prerequisite: Admission to graduate study. LEC

T&L 851 Supervision of Student Teaching (2). A study of the organization and functions of student-teaching programs. Emphasis on the development of effective interpersonal relationships among school administrators, cooperating teachers, university supervisors, and student teachers. Designed for both administrative and instructional personnel. Prerequisite: Admission to graduate study. LEC

T&L 852 School Resource Management (3). An examination of the sources and uses of fiscal resources in education including underlying concepts from economic theory; the impact of values on fiscal policy, state funding formulas, and school budgeting and accounting practices. LEC

T&L 853 Staff Evaluation and Development (3). An examination of current trends in personnel evaluation with a focus on clinical supervision and adult development. Students will participate in simulations which emphasize the development of skills in classroom observation, conference techniques, evaluation of teaching artifacts, and the construction of staff development plans. LEC

T&L 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 of those characteristics for schools and schooling. LEC

T&L 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 practicing observation, recording and conferencing skills. A variety of approaches is considered, but behaviorally-analyzed 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: T&L 750, T&L 752, T&L 753, or T&L 840. LEC

T&L 856 Law and Special Education (3). This course focuses on laws that apply to special education. The American legal system, particularly in respect to special education, the constitutional and statutory provisions of federal and state law are the focal points of this course along with an analysis of the implications of those laws being reviewed. The course relates equal protection, procedural due process, and substantive due process doctrines to school practices affecting disabled children and examines the sex principles of P.L. 94-142 and similar principles in state legislation. This course is not the equivalent of or a substitute for T&L 752. (Same as SPED 851). Prerequisite: SPED 750 or permission of instructor. LEC
Teaching & Leadership

T&L 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 and advocacy, medical assistance, employment, 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 750 or permission of instructor. LEC

T&L 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 research. Not valid for core requirement in history and/or philosophy of education. (Same as SPED 853) Prerequisite: SPED 750, SPED 851, SPED 852 or permission of instructor. LEC

T&L 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 theory. Normally a limited number of authors will also be selected for monographic treatment. Prerequisite: T&L 770 or T&L 771 is recommended. LEC

T&L 871 Introduction to Qualitative Research (3). An introduction to the foundations of and techniques associated with qualitative research methods. Students will practice interview and participant observation skills and will analyze and interpret data. Additional topics include crafting qualitative research questions, ethics of fieldwork, and establishing trustworthiness and transferability of methods employed in education and other related fields will be introduced. LEC

T&L 880 The Community/junior College (3). A survey of the history and development of the community/junior college. Particular emphasis will be given to 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

T&L 881 Seminar in Leadership (3). The purpose of this seminar is to explore the dynamic field of education, particularly higher education, from a variety of disciplinary perspectives. Reading lists 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 systems perspective, as a manager of meaning and a change agent. We then challenge ourselves to reconstruct our leadership realities with the help of several critical perspectives as we prepare to examine as well as the leaders and as well as those who they will, and need to, be in the educational organizations of tomorrow. LEC

T&L 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. The course focuses on three periods: (1) the founding of Harvard to 1865; (2) dissent, disruption, and change, 1865-1979; and (3) the future and crucial issues, the 1980's. European higher education and its early influence on higher education in the United States is also examined. LEC

T&L 883 The College Student (3). The characteristics of college students in college on student behavior, changing attitudes, values, beliefs, and the implications of recent research on traditional and new students for instructional and administrative practices. LEC

T&L 885 Assessment and Program Evaluation in Higher Education (3). Nature, objectives, and basic procedures of assessment and program evaluation as applied to the various aspects of higher education settings. In addition to basic procedures for evaluating programs, topics covered include accreditation, program review, benchmarking, student outcomes assessment, and evaluation of teaching in colleges and universities. Prerequisite: PRE 715 or equivalent. LEC

T&L 895 Internship (1-5). The on site development of the skills necessary to effectively function as a school building leader. Activities will be tailored to the needs of individual students in consultation with a university adviser and a field adviser. FLD

T&L 896 Seminar in: _____ (1-4). LEC

T&L 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

T&L 898 Master's Project (1-4). RSH

T&L 899 Master's Thesis (1-9). RSH

T&L 913 Education and Research Reading (3). An intensive investigation of research in reading. An evaluation of research dealing with the nature of the reading process. Discussion of findings in view of contemporary theory and practice. Prerequisite: T&L 716 or equivalent and PRE 710 and 811. LEC

T&L 940 Change Processes and Staff Development (3). An intensive study of the theoretical and practical aspects of professional development and the elements involved in the change process. Emphasis will be on understanding the relationships among educators, the change process, and the improvement of educational programs. Prerequisite: Six hours of T&L courses and permission of instructor. LEC

T&L 941 Contemporary Research of Teaching Effectiveness (3). A review of recent research on the conceptualization, measurement, and improvement of teaching effectiveness. Particular attention is given to the history of efforts to improve teaching, to the reasons why such efforts have often been unsuccessful, and to the present contributions of the "micro-criteria" approach to the problem. LEC

T&L 943 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 assessment, coordination of both human and material resources, and the dynamics of change strategies. LEC

T&L 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 evaluation of classroom instruction, including the 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 teaching becomes more formal and consequential. Three hours of credit will be awarded to those enrolled in the laboratory section of the course. LEC

T&L 950 Educational Policy Making and Reform (3). An analysis of patterns of influence, organization, and governmental agencies which impact education at the community, state and national levels. Particular emphasis is placed on analysis of policy development process and the relationship of policy to administration. Recommended to students in educational administration. LEC

T&L 951 Supervision of Instruction (3). A study of the principles and techniques necessary for coordinating, monitoring, and improving the educational programs of elementary and secondary schools. LEC

T&L 952 School Finance: Policy and Practice (3). The objective of this course is to understand the financial systems and mechanisms used by states in the funding of elementary and secondary education in the United States. In simple language, we will be concerned with five basic issues: (1) Where the money comes from; (2) How it is redistributed; (3) How it is spent; (4) The relative effectiveness of spending decisions including selected international comparisons; and (5) How the previous four financial activities participate in a common financial ecology. The course provides an overview of theory and concepts central to the understanding of school finance with an emphasis on policy issues. It also examines the mechanics of school finance funding in light of state policies. LEC

T&L 953 District Human Resource Management (3). An in-depth study of theory and research in personnel administration. The focus will be on current literature dealing with empirical assessments of personnel theory and techniques. Specific concepts to be considered include the following: educator characteristics, job analysis and design, personnel recruitment, selection and evaluation techniques, staffing and development, and labor relations. Prerequisite: T&L 753 or its equivalent. LEC

T&L 954 Advanced Organizational Theory and Research in Administration (3). A synthesis of current theoretical and empirical developments in formal organizations. These are evaluated for applicability to administering educational organizations. LEC

T&L 955 District Business Management (3). This course emphasizes skills for effective and efficient business and financial management of school districts in a Kansas or Missouri context. Basic topics include: Short range and long range financial planning, analysis of financial statements, budget preparation, fund accounting and financial reporting, contracting of services including transportation and food services, staff salaries and benefits and insurance. The course also includes a number of strategic methods for institutional planning including: Cost Benefit Analysis, Cost Effectiveness Analysis, and enrollment, revenue and expenditure forecasting techniques. Prerequisite: T&L 952. LEC

T&L 956 District Leadership (3). The focus of the course is the role of the public school district superintendent. Organizational study will include assigned readings, lectures, guest speakers, discussion, and the completion of a study project. The course will include consideration of such topics as boardmanship, 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 intention of completing requirements 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

T&L 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 in-
T&L 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
T&L 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
T&L 960 Specialist Project (1-4). RSH
T&L 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
T&L 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 T&L 971 and T&L 772 is the philosophical emphasis of the latter. LEC
T&L 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 education. Survey 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
T&L 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; retrenchment 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
T&L 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
T&L 982 The College Teacher (3). Presents college teaching as a profession; study and appraisal of effective methods of teaching; and the research function of the college teacher. Open to all regular graduate students. LEC
T&L 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
T&L 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
T&L 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
T&L 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
T&L 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
T&L 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 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. FL
T&L 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 college 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. FL
T&L 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH
T&L 998 Seminar in: _____ (1-4). LEC
T&L 999 Doctoral Dissertation (1-15). RSH

Visual Arts Education
See the School of Fine Arts chapter of this catalog.
School of Engineering

Stuart Bell, Dean
Learned Hall, 1530 West 15th St., Room 4010
Lawrence, KS 66045-7609, (785) 864-3881

Admission ............................................... 137
Procedure ................................................... 137
Baccalaureate Preparation ......................... 137
Facilities ..................................................... 137
English Proficiency Requirement .............. 137
Graduate Grade-point Average Requirement .................................................................. 137
Degree Programs ....................................... 137
Aerospace Engineering .................................. 138
M.S. Degree Requirements ............................ 138
M.E. Degree Requirements .......................... 138
Ph.D. Degree Requirements ........................ 138
D.E. Degree Requirements .......................... 139
Aerospace Engineering Courses .................. 139
Chemical & Petroleum Engineering ............ 141
M.S. Degree Requirements ............................ 141
M.S. in Chemical Engineering: Option A .......... 142
M.S. in Chemical Engineering: Option B .......... 142
M.S. in Petroleum Engineering .................... 142
Ph.D. Degree Requirements ........................ 142
Admission ................................................... 142
Qualification as a Ph.D. Aspirant ................. 142
Ph.D. Advisory Committee .......................... 142
Plan of Study & Foreign Language or Other Research Skills Requirement (FLORS) ......................... 143
Comprehensive Examination ..................... 143
Ph.D. Dissertation & Final Oral Examination .... 143
Chemical & Petroleum Engineering Undergraduate Courses ...................................... 143
Chemical & Petroleum Engineering Courses .. 144
Civil, Environmental, & Architectural Engineering .................................................. 145
Civil Engineering ......................................... 145
M.S. Degree Requirements ............................ 145
M.C.E. Degree Requirements ....................... 146
Ph.D. Degree Requirements ........................ 146
D.E. Degree Requirements .......................... 146
Architectural Engineering .......................... 146
Degree Programs .......................................... 147
M.S. Degree Requirements ............................ 147
M.C.M. Degree Requirements ......................... 147
Financial Aid .................................................. 147
Facilities ...................................................... 147
Architectural Engineering Courses ............... 147
Civil Engineering Courses ......................... 148
Electrical Engineering & Computer Science .................................................. 151
Admission ................................................... 152
M.S. Degree Requirements ............................ 152
Doctoral Degree Requirements ..................... 153
Electrical Engineering & Computer Science Courses ................................................ 153
Engineering Management ............................. 156
Admission ................................................... 156
M.S. Degree Requirements ............................ 157
Engineering Management Courses ............... 157
Engineering Courses ...................................... 158
Engineering Physics ........................................ 158
Engineering Physics Courses ...................... 159
Mechanical Engineering ................................ 159
M.S. Degree Requirements ............................ 159
Ph.D. Degree Requirements ........................ 159
D.E. Degree Requirements .......................... 160
Financial Aid .................................................. 160
Mechanical Engineering Courses .................. 160

Photo, page 134: Chemical and petroleum engineering graduate research involves an independent attack on a significant engineering problem.
Admission

Procedure
Admission requirements are the same as those of the Graduate School, with the following additions: two official copies of the undergraduate transcript, transcripts of any graduate work, and three letters of recommendation from references. Some engineering departments also require the Graduate Record Examination. Applications must be accompanied by a fee:

- Domestic students applying online: $45
- Domestic students applying on paper: $55
- International students applying online: $55
- International students applying on paper: $60

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 qualify by taking appropriate undergraduate courses as determined by the department.

Facilities
Engineering faculty members and graduate students are major users of the laboratories, facilities, and services of the Space Technology Center and the Flight Research Laboratory. The school provides a major contribution to the work of the Tertiary Oil Recovery Project, the Transportation Center, the Water Resources Center, the Kurata Thermodynamics Laboratory, the Information and Telecommunications Technology Center, the Energy Analysis and Diagnostic Center, the Environmental Engineering and Science Research Laboratory, the Intelligent Systems and Automation Laboratory, the Structural Engineering and Materials Laboratory, the Telecommunications and Information Sciences Laboratory, and the Biomedical Engineering Laboratory. See the Research and Academic Support chapter of this catalog.

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 will result in dismissal from the graduate engineering program.

Graduate Grade-point Average Requirement
In addition to completing a sequence of courses approved by his or her committee and other requirements appropriate to the graduate degree, a student must (1) attain at least a 3.0 grade-point average in all graduate courses and (2) attain at least a 3.0 grade-point average in all course work, including undergraduate courses taken to make up background deficiencies (excluding Applied English Center courses).

Degree Programs
The Master of Science degree is offered in aerospace engineering, architectural engineering, chemical engineering, civil engineering, computer science, electrical and computer engineering, engineering management, environmental engineering or science, mechanical engineering, petroleum engineering, and water resources science.

The Master of Engineering is offered only in aerospace engineering. The Department of Civil and Environmental Engineering offers the Master of Civil Engineering. The Department of Architectural Engineering offers the Master of Construction Management.

The School of Engineering offers a Ph.D. degree in these fields: aerospace engineering, 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.

For students interested in careers in engineering design or engineering project management, the School of Engineering 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 Associate Dean, Research and Graduate Programs, School of Engineering, or the School of Business.
Aerospace Engineering

Chair: Mark S. Ewing
Graduate Adviser: Jan Roskam
Learned Hall, 1530 West 15th St., Room 2004
Lawrence, KS 66045-7609, (785) 864-4267
www.engr.ku.edu/ae

Professors: Downing, Farokhi, Lan, Roskam, Taghavi
Professor Emeritus: Muirhead
Associate Professors: Ewing, Sorensen
Assistant Professor: Hale

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.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

M.S. Degree Requirements

The Master of Science program has two options. Option A requires a minimum of 30 credit hours of graduate work including 6 hours earned in the satisfactory completion of a thesis. Option B 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 Master of Engineering 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 the general rules and regulations of the Graduate School, a student must meet departmental requirements for the Ph.D. degree. 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 the student’s breadth of knowledge and determines his or her ability to formulate mathematical representations of real physical situations. The examination covers mathematics and three of the following five areas: aerodynamics, structures and materials, dynamics and controls, design, 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 research skills requirements, 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 foreign language or research skills requirement (FLORS) by selecting and having approved by the chair of the committee one of the following 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 must 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 Flight Test Engineering
- CE 721 Introduction to Experimental Stress Analysis

**Computational Courses**
- ECE 611 Noise Reduction in Electronic Systems
- ECE 744 Digital Signal Processing I
- ME 761 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 can not also be used to satisfy the doctoral degree course requirements.

Two consecutive semesters, excluding summer sessions, must be spent in resident study. During the pe-astronave surveys the University of Kansas • 2003-05 GRADUATE SCHOOL CATALOG

According to the Accrediting Board for Engineering and Technology, KU has the “premier aircraft design program in the country.”

A former KU student and Flight Research Laboratory scientist and two NASA researchers have been recognized for the invention of a monitoring system to help pilots take off safely.
Aerospace Engineering

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 D.E. 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.

The student must be under joint guidance of a preceptor, who will be 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 System 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 552 Honors Flight Dynamics and Control (4).
AE 560 Spacecraft Systems (3).
AE 572 Fundamentals of Jet Propulsion (3).
AE 573 Honors Propulsion (3).
AE 590 Aerospace Seminar (1).
AE 592 Special Projects in Aerospace Engineering (1-5).
AE 593 Honors Research (1-5).
AE 670 Aerospace Propulsion III (3).
AE 701 Structural Design (3). Design and internal construction of major structural components: wing, fuselage, empennage, landing gear, engine pylons. Layout of major structures and system interfaces, internal geometry, material alternates, manufacturing alternates and design constraints. Certification and proof of design requirements. Prerequisite: AE 421, AE 508, and AE 510. LEC
AE 704 Dynamics and Vibrations (3). Problems in engineering dynamics and vibrations. Topics include applications of generalized forces and coordinates, Lagrange equations, and a study of the performance of single and multiple degree of freedom in vibrational systems. (Same as CE 704.) Prerequisite: AE 508. LEC
AE 707 Aerospace Structural Loads (3). Steady state spanwise and chordwise airloads, windsheds, gusts, landing gear loads, bird strike,
Aerospace Engineering

troublesome loads, special commercial and military load requirements. Prerequisite: AE 507 and AE 545. LEC
AE 709 Structural Composites (3). Fiber materials, tapes, cloths, resin systems, general aerodynamics, heat transfer, stress analysis, thermodynamics, and vibrations. The expression of these problems in a form amenable to quantitative evaluation by dimensional reasoning, analog techniques, relaxation methods, and classical analysis. LEC
AE 710 Advanced Structural Composites (3). The course objectives are to provide each student with a more in-depth understanding of and practical hands-on experiences with available fiber and matrix materials, manufacturing methods, and the mechanical behavior of composite materials and structures. Modern software tools and manufacturing methods are addressed, to include optimization techniques and design for manufacturability. Classical plate theory, bending, buckling and vibration of anisotropic plates is addressed. Damage tolerance and repairability, as well as nondestructive evaluation techniques are also covered. Skills learned in previous composite courses will be utilized to design, analyze, and fabricate structures of current industrial relevance. Prerequisite: AE 508 or similar, AE 709 or similar, or consent of instructor. LEC
AE 712 Theoretical Techniques of Evaluation (3). The formulation of problems arising in aerodynamics, heat transfer, stress analysis, thermodynamics, and vibrations. The expression of these problems in a form amenable to quantitative evaluation by dimensional reasoning, analog techniques, relaxation methods, and classical analysis. LEC
AE 711 Aircraft Design Laboratory I (4). The purpose of this course is to provide aerospace engineering students with an opportunity to gain more in-depth airplane design education through team design work. This team design work will involve detailed design efforts in such areas as: landing gear design, systems design, propulsion system integration, structures design, and aerodynamic design. Prerequisite: AE 507, AE 521, AE 545, AE 551, AE 571. AE 521 may be taken concurrently. LAB
AE 722 Aircraft Design Laboratory II (4). The purpose of this course is to provide aerospace engineering students with an opportunity to gain more in-depth airplane design education through team design work. This team design work will involve detailed design efforts in such areas as: landing gear design, systems design, propulsion system integration, structures design, and aerodynamic design. Prerequisite: AE 507, AE 521, AE 545, AE 551, AE 571. AE 521 may be taken concurrently. LAB
AE 724 Propulsion System Design and Integration (3). Theory and design of propulsion systems for both low and high speed aircraft and their integration into the overall configuration. Internal and external design and analysis of inlets and nozzles including their effect on the external aerodynamics of the aircraft. Engine/inlet compatibility and the problems of matching both steady state and dynamic characteristics to obtain peak, stable performance. Prerequisite: AE 521 and AE 572. LEC
AE 725 Numerical Optimization and Structural Design (3). Classical theories of unconstrained and constrained optimization. Numerical techniques for unconstrained optimization, including the steepest descent, conjugate gradient and “Newton’s” methods. Numerical techniques for constrained optimization, including sequential approximate problem techniques as well as the method of feasible directions. Computer aided solutions to practical design problems in aerospace engineering. Final design project. Prerequisite: MATH 250 or junior status. LEC
AE 730 Advanced Experimental Fluid Dynamics (3). Theory, operation, and hands-on laboratory experiments on various flow measurement techniques including: multi-hole directional pitot probes, hot-wire anemometry, laser-Doppler velocimetry and particle image velocimetry. Flow visualization techniques including smoke injection, dye injection, helium bubbles, etc. Prerequisite: AE 430, AE 545, or consent of instructor. LEC
AE 731 Supersonic Aerodynamics Laboratory (1). Supersonic wind tunnel and shock tube operations, techniques, and instrumentation. Flow study and model testing. Prerequisite: AE 545. LAB
AE 732 Introduction to Flight Test Engineering (3). Course presents flight test principles, instrumentation, planning, and operation of aerospace vehicle flight testing. Course is structured with lectures, laboratories, and flight experiments. Student teams plan and execute a series of flight test 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 500 or consent of instructor. LEC
AE 743 Compressible Aerodynamics (3). Advanced supersonic flow theory for aircraft and space vehicles. Navier-Stokes equations, method of characteristics; separated flows; real gas effects. Prerequisite: AE 545. LEC
AE 745 Applied Wing and Airfoil Theory (3). Applications of potential flow theory to aerodynamics of airfoil sections. Effect of Mach number and angle of attack on lift, drag and pitching moments. Prerequisite: AE 545. LEC
AE 746 Computational Fluid Dynamics (3). Applications of numerical techniques 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. LAB
AE 748 Helicopter Aerodynamics (3). Helicopter components and their functioning; rotor aerodynamics, 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 aerospace 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 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, EECS 519, 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: AE 250 and CE 301 or equivalent. LEC
AE 766 Spacecraft Attitude Dynamics and Control (3). Dynamics of rigid spacecraft, attitude control devices including momentum exchanges, mass movement, gravity gradient and reaction 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 202 required, PHSX 301 or PHYS 351 recommended. LEC
AE 771 Rocket Propulsion (3). Basic elements of rocket propulsion systems, propellants, and performance. Prerequisite: AE 545 or equivalent. LEC
AE 790 Special Problems in Aerospace Engineering (1-5). Directed studies of advanced problems in aerospace engineering. Open only to graduate students with departmental approval. RSH
AE 803 Aerelasticity (3). Introduction to self-excited vibrations—wing flutter, panel flutter, unsteady aerodynamics, launch vehicle structural vibrations. Prerequisite: AE 508, AE 545, AE 551, and AE 704. LEC

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Aerospace Engineering: Chemical & Petroleum Engineering


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 850 Advanced Control Seminar (2). Extension of AE 750 covering digital optimal control, optimal estimation, and advanced control topics. Combination of lecture, seminar, 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 internship experience. 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 advanced problems in aerospace engineering. Open only to graduate students with consent of instructor. RSH

AE 895 M.S. Thesis (1-10). RSH

AE 896 M.E. Project (3-6). A design problem or system study satisfying the project requirements for the Master of Engineering degree in Aerospace Engineering. Prerequisite: Admission to Master of Engineering in Aerospace Engineering program. RSH

AE 941 Hypersonic Aerodynamics (3). The gas dynamics of aerospace vehicles operating in the speed range above Mach 5. Rashi-fied 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 internship experience. Prerequisite: Admission to DE program and approved internship. FLD


AE 997 D.E. Project (1-16). A major design problem or system study satisfying the project requirements for the Doctor of Engineering in Aerospace Engineering degree. Prerequisite: Must be a Candidate for the Doctor of Engineering in Aerospace Engineering. RSH

Chemical and Petroleum Engineering

Chair: Bala Subramaniam, bsubramaniam@ku.edu
Learned Hall, 1530 West 15th St., Room 4006
Lawrence, KS 66045-7609. (785) 864-4965
www.cpe.engr.ku.edu

Graduate Adviser: G. Paul Willhite,
4006 Learned Hall, (785) 864-2906
Graduate Recruiting Director: Shapur Vossoughi,
4006 Learned Hall, (785) 864-2902

Professors: Editor: Bishop, Davis, Green, Locke, Subramaniam, Vossoughi, Willhite

Professors Emeriti: Maloney, Mesler, Preston, Rosson, Swift, Walton

Associate Professors: Howat, Nguyen, Nordheden, Osternann, Southard

Assistant Professors: Camarda, Stagg-Williams

Associate Scientist: McCool

C&PE undergraduate programs provide a foundation that enables a graduate to pursue a professional engineering career. For those who want a deeper academic understanding of these branches of engineering or who plan to work in research or development, master's and doctoral programs are available. The department offers the M.S. degree in chemical engineering and petroleum engineering. In addition, the Ph.D. degree may be earned. Applicants for graduate work in any program should read the General Information chapter of this catalog to determine general 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, phase equilibrium, and flow through porous media.

In the doctoral program, the emphasis is on research that involves an independent attack on a significant engineering problem. Specific Ph.D. course work depends on the 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 plan of study for a Ph.D. student.

These guidelines include departmental requirements and are intended to assist the student as well as the advisory committee in preparing a plan of study toward a degree.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.S. Degree Requirements

The master's programs are designed for students with baccalaureate degrees in chemical or petroleum engineering. Students with degrees in another branch of engineering or in mathematics, chemistry, physics, or other sciences may be admitted and are encouraged to consider the programs. They usually must take some undergraduate course work to provide the necessary background for graduate courses.

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 as elective hours in the M.S. degree program.

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 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.

This option does not require a thesis but does require
a written report of 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 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 evolved 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

Core Course Work (15 hours)
- C&PE 701 Methods of Chemical and Petroleum Calculations ..........3
- C&PE 721 Chemical Engineering Thermodynamics ........................3
- C&PE 722 Kinetics and Catalysis ...........................3
- C&PE 723 Convective Heat and Momentum Transfer .............3
- C&PE 732 Advanced Transport Phenomena II .........................3

Electives (6 hours)
- No more than two courses numbered below 700. No more than three courses in Engineering Management or Business or both ..............15

Research (3 hours)
- C&PE 825 Graduate Problems in Chemical and Petroleum Engineering .........................................................3

M.S. in Petroleum Engineering

Core Course Work (15 hours)
- C&PE 701 Methods of Chemical and Petroleum Calculations ..........3
- C&PE 721 Chemical Engineering Thermodynamics ........................3
- C&PE 723 Convective Heat and Momentum Transfer .............3
- C&PE 731 Convective Heat and Momentum Transfer .............3
- C&PE 795 Enhanced Petroleum Recovery ..............................3
- C&PE optional course ..................................................3

Research (9 hours)
- No more than two courses numbered below 700. No more than three courses in Engineering Management or Business or both ..............15

Elective (6 hours)
- No more than two courses numbered below 700. No more than three courses in Engineering Management or Business or both ..............15

Ph.D. Degree Requirements

Admission. Admission is by approval of the graduate faculty of the department upon recommendation by the graduate standards committee. Admission is based on demonstrated potential to complete a Ph.D. program successfully. The measures of performance used in the decision process are undergraduate and graduate grade-point averages, research performance, letters of recommendation and GRE scores. A student who has not received a degree from a university in the United States must submit a Test of English as a Foreign Language report and is expected to have a grade of 600 or higher on it. Normally, admission occurs after a student has completed an M.S. degree. In rare cases, a student may be admitted to the Ph.D. program without an M.S. Such admission normally is granted only if the applicant has clearly demonstrated exceptional performance in an undergraduate program and in any graduate work. Students who are admitted to the Ph.D. program and who do not complete an M.S. degree in chemical and petroleum engineering must take the M.S. core courses (15 credit hours) over and above the course work specified for the Ph.D. degree.

Qualification as a Ph.D. Aspirant. All students must show competence in four areas of chemical engineering: computation, transport phenomena, thermodynamics, and kinetics. They must take the qualifying examinations after the first semester, usually the fall. Examinations in all four subjects are offered at the end of fall semester.

The 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. Qualifying examinations for computation and thermodynamics could be the regular fall semester final examinations for C&PE 701 and C&PE 721, if they are comprehensive. Qualifying examinations for transport phenomena and kinetics are scheduled during the same period as the fall semester final examinations.

The grade is based on the scale used in the course, so that a student scoring as many or more points as one who received an A or a high B in the course passes the examination. Instructors must turn in graded examinations and assigned grades to the graduate standards committee before the deadline for submitting final grades. A qualifying examination is waived for a student who completes the master's core course in that subject at KU with a grade of A. 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 course work 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. Where performance has been satisfactory, the committee recommends that the student be designated a Ph.D. aspirant.
- b. Where performance has been clearly unsatisfactory, the committee recommends that the student be dropped from the program.
- c. In cases where a student has been admitted to the Ph.D. program without completing an M.S. degree and where performance has been judged marginal or unsatisfactory, the committee recommends that the student either be placed in the M.S. program or be dropped from the graduate program.

Once a student has been designated a Ph.D. aspirant, monitoring of progress is the responsibility of the Ph.D. advisory committee.

Ph.D. Advisory Committee. A three-member advisory committee is formed for each student once the student has been designated a Ph.D. aspirant. The student's research director normally serves as the committee chair. The committee works with the aspirant to de-
velop an appropriate overall plan of study and monitors the progress of the student throughout the remainder of the Ph.D. program.

Plan of Study and Foreign Language or Other Research Skills Requirement (FLORS). 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 credit hours of course work beyond that required for an M.S. degree and 30-34 credit hours of research work as specified in the following table.

Course Work (18 credit hours)
- C&PE 800 Seminar .................................................. 3
- C&PE elective ............................................................ 9
- Outside electives ....................................................... 6
- C&PE 902 Preparation for the Ph.D. Comprehensive Examination .................................................. 3

C&PE Research (30-34 credit hours)
- C&PE 825 Graduate Problems in Chemical and Petroleum Engineering (optional) ................................. 2-4
- C&PE 904 Research .................................................... 9

The following guidelines apply in selection of course work:
1. Enrollment in the C&PE seminar (C&PE 800) every semester in residence.
2. Enrollment for a minimum of three graduate-level courses in C&PE. These do not include C&PE 902 Preparation for the Ph.D. Comprehensive Examination or C&PE 800 Seminar. All courses in the C&PE department that count toward the Ph.D. degree must be numbered 700 or above. Students are encouraged to take C&PE 936 (chemical engineering emphasis) or C&PE 933 (petroleum engineering emphasis) as part of this requirement.
3. Enrollment for 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 the master’s degree do not count toward the Ph.D. degree.
5. Normally, C&PE 825 is connected in some way to thesis research and counted as research credit. However, if C&PE 825 is used to broaden and diversify the student’s knowledge, a maximum of 3 credit hours will be allowed as course credit.

These guidelines are to aid in the preparation of the program of study for most Ph.D. students. However, there may be exceptions, arising from the student’s academic background and the type of research, wherein the selection of courses may not adhere to these guidelines. In such exceptional cases, the student’s Ph.D. program of study 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 by the aspirant. Work done to fulfill this requirement should involve study in an area complementary to the selected research area and should enhance the student’s ability to carry out the research. The FLORS requirement may be satisfied by completing course work within 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 may undertake the comprehensive examination after completion of a majority of the course work for the Ph.D. and all of the department, school, and Graduate School 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 consisting of at least five persons, including the advisory committee and at least one person outside the department. The aspirant identifies a research problem within 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 examination 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 on the comprehensive 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&PE 902 during the first year of the Ph.D. program. On receipt of a grade of Honors or Satisfactory on the comprehensive examination, the aspirant is admitted to candidacy for the degree of Doctor of Philosophy. 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 time constraints prescribed by the Graduate School. 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
C&PE 111 Introduction to the Profession
C&PE 117 Introduction to Petroleum Engineering Profession I
C&PE 121 Introduction to Computers in Engineering
C&PE 127 Introduction to Petroleum Engineering Profession II
C&PE 211 Material and Energy Balances
C&PE 221 Basic Engineering Thermodynamics
C&PE 511 Momentum Transfer
C&PE 512 Process Engineering Thermodynamics
C&PE 517 Reservoir Engineering I
C&PE 521 Heat Transfer
C&PE 522 Economic Appraisal of Chemical and Petroleum Projects
C&PE 523 Mass Transfer
C&PE 524 Chemical Engineering Kinetics and Reactor Design
C&PE 527 Reservoir Engineering II
C&PE 528 Well Logging
C&PE 615 Chemical Engineering Design I
C&PE 615 Introduction to Process Dynamics and Control
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 625 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 Undergraduate Seminar in Chemical and Petroleum Engineering  
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 613 Chemical Engineering Design I (4).  
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 622 Chemical Engineering Design II (3).  
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 Undergraduate Seminar in Chemical and Petroleum Engineering (1).  
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 701 Methods of Chemical and Petroleum Calculations (3).  
The utilization of advanced mathematical methods and computing techniques in the solution of problems in these fields. LEC  
C&PE 710 Subsurface Methods in Formation Evaluation (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. Laboratory. Prerequisite: GEOL 555 or C&PE 517 or consent of instructor. 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 718 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 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. Prerequisite: C&PE 524 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 linear viscoelastic fluids, mechanical models such as those of Jeffrey and Maxwell. Prerequisite: C&PE 511 or an equivalent course in fluid mechanics. LEC  
C&PE 756 Introduction to Biomedical Engineering (3).  
The graduate elective form of C&PE 656; a study of transport phenomena and kinetics in physiological systems. An introduction to mathematical modeling of biological processes is given with additional homework problems designed for upper level graduate students with prior numerical simulation experience. An oral presentation of the final research report is required for this section. Prerequisite: C&PE 701, CHEM 626 and C&PE 525, or consent of instructor. LEC  
C&PE 765 Corrosion Engineering (3).  
Electrochemical basis of corrosion. Types of corrosion and corrosion mechanisms. Corrosion control measures and industrial problems. Prerequisite: ME 306 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 Optimization of Engineering Designs (3).  
Study of methods for optimizing engineering designs with specific applications illustrating analytical and numerical approaches. Topics covered include grid and random methods, gradient methods, penalty functions, linear programming, and treatment of constrained and unconstrained problems. Lecture, recitations, and semester projects. Prerequisite: Senior standing in engineering. 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 as applied to the flow of fluids in porous media. Prerequisite: C&PE 527. 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 heterogeneous phase equilibrium phenomena from the standpoint of the phase law of Gibbs. Applications include phase relations in oil and condensate reservoirs and those for systems at cryogenic temperatures. LEC  
C&PE 800 Seminar (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 information. For the remainder of the year, the seminar will involve presentation of current research and other topics of interest to chemical and petroleum engineers. These presentations will be made by invited guests, faculty, and advanced graduate students. LEC  
C&PE 801 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&PE 800. LEC  
C&PE 803 Research (1-6).  
For M.S. candidates. RSH  
C&PE 804 Petroleum Management Seminar (1).  
Structure, operation, and problems of the petroleum industry from a management viewpoint. Presentations will be made by faculty, advanced students, and invited guests. Prerequisite: Permission of instructor. LEC  
C&PE 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&PE 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&PE 904 Research (1-12).  
For Ph.D. candidates. RSH  
C&PE 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&PE 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&PE 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 of solution of the describing differential equations. LEC

C&PE 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&PE 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&PE 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&PE 939 Advanced Topics in the Transport Phenomena: ______ (14). Advanced study in various branches of transport phenomena on topics which may vary from year to year. LEC

C&PE 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

Civil, Environmental, and Architectural Engineering

Chair: Tom Mulinazzi
Learned Hall, 1530 West 15th St., Room 2006
Lawrence, KS 66045-7609, (785) 864-3747
http://cee.ku.edu/web

Graduate Adviser: Bruce McEnroe,
2008 Learned Hall, (785) 864-2928

Professors: Darwin, Kurt, Lane, Lee, Marotz, McCabe, McEnroe, Mulinazzi, Parr, Randtke, Roodis, Rolle, Thomas

Professors Emeriti: Angino, Douglas, Easley, Lucas, McKinney, Pogge, Willems

Associate Professor: Glavinich, Graham, Rock

Assistant Professors: Browning, Ebihara, Matamoros, Medina, Parsons, Ramirez, Young

The department offers graduate programs leading to the following degrees:

- Master of Science with a major in Architectural Engineering
- Master of Science with a major in Civil Engineering
- Master of Science with a major in Environmental Engineering
- Master of Science with a major in Environmental Science
- Master of Science with a major in Water Resources Science
- Master of Civil Engineering
- Master of Construction Management
- Doctor of Philosophy with a major in Environmental Engineering
- Doctor of Philosophy with a major in Environmental Science
- Doctor of Philosophy with a major in Civil Engineering
- Doctor of Engineering with a major in Civil Engineering

The department admits for all semesters. Students may pursue degrees full or part time. For regular admission, an overall grade-point average of 3.0 or higher on a 4.0 scale is required. Probationary or provision admission may be given to applicants with lower grade-point averages. Graduate Record Examination scores are required and are used in the evaluation process, but minimum scores for admission have not been established. The GRE engineering and other subject examinations are not required. The Test of English as a Foreign Language is required for international applicants. To speed processing of the application, take the GRE and TOEFL as soon as possible.

Submit your application to the Graduate School online at www.graduat.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Civil Engineering

The Master of Science degree program in civil engineering is for students who have ABET-accredited baccalaureate degrees in civil engineering or a closely related area, and who have either a broad interest in civil engineering or an interest in structures, soil mechanics and foundations, transportation, construction, or engineering mechanics. The environmental engineering master's degree is for students who have baccalaureate degrees in civil engineering or a closely related area and an interest in the environment.

The Master of Civil Engineering degree provides an option for working professionals who need the research component offered by the M.S. degrees. An ABET-accredited baccalaureate engineering degree is required for admission. This degree requires two courses in engineering management to complement the technical engineering graduate courses. A final written examination covering the technical specialty is required unless the student has passed the Professional Engineers examination.

The programs leading to the degrees of Master of Science and Doctor of Philosophy with a major in environmental science and of Master of Science with a major in water resources science are interdisciplinary programs intended primarily for students with nonengineering baccalaureate degrees.

Programs leading to the Doctor of Philosophy degree with a major in civil engineering and the Doctor of Engineering degree cover the full range of engineering disciplines represented in the department.

In addition to programs on the Lawrence campus, the graduate faculty regularly teach evening courses on the KU Edwards Campus in the Kansas City area for employed graduate engineers working toward one of the department's master's degrees.

M.S. Degree Requirements. All candidates for the Master of Science degree have two options available.

Option A requires 30 hours of credit including a thesis of 6 hours (6-10 hours for the environmental degree) and a final oral examination including defense of the thesis.
Option B requires 30 hours of credit including a 3- or 4-hour special problem investigation in the major interest and a final examination. It does not require a thesis.

The M.S. degree program requires a minimum of 9 hours of graduate-level course work in one of the following areas: (1) construction, (2) engineering mechanics, (3) environmental, (4) soils and foundations, (5) structures, (6) transportation, or (7) water resources. In addition, a minimum of 6 total hours of graduate-level work is required in any one or more of the remaining six departmental areas.

The two environmental degrees require an understanding of chemical, biological, and physical principles of environmental engineering processes, i.e., satisfactory completion of CE 770, CE 772, CE 773, and CE 774 or equivalent. Substitutions require the approval of both the student's committee and the graduate adviser.

The water resources science degree requires that the course program include a basic 15-hour core consisting of 3 hours of graduate-level work in each of five of the following six areas: water quality, surface water hydrology, groundwater, water resources, fluid mechanics, and meteorology.

Without specific approval of the departmental graduate studies committee, not more than 9 hours of non- civil-engineering courses nor more than 6 hours of courses numbered below 700 (of which only 3 hours may be in civil engineering) may be applied toward any of the department's master's degrees. Also, no more than 4 hours of special problem credit may be applied toward any of the master's degrees without approval of the departmental graduate studies committee.

M.C.E. Degree Requirements. The Master of Civil Engineering degree requires 34 semester hours of graduate course work, of which a minimum of 7 hours must be in engineering management core courses. The core courses are EMGT 806, EMGT 809, EMGT 810, EMGT 811, EMGT 813, EMGT 821, EMGT 823, and EMGT 830. EMGT 809 is required and one of either EMGT 810 or EMGT 823 is accepted. The remaining 27 hours of credit in the technical courses is subject to the same criteria as the Master of Science degree described above, with the additional restriction that no more than 10 hours of engineering management courses are allowed. A written 4-hour final examination is required in the student's concentration. This examination is waived if the student has passed a written examination to earn a professional engineering license.

Ph.D. Degree Requirements. An aspirant for the Ph.D. degree must pass a qualifying examination. The department normally gives this examination upon completion of the aspirant's M.S. work or at a comparable level for non-M.S. students. Before being admitted to the comprehensive examination, the aspirant must satisfy the department's basic research skills requirement. The purpose of this requirement is to provide the student with the basic skills in the chosen field of research. In defining the area in which dissertation research is to be conducted, the aspirant selects, with the guidance and consent of the major professor, the basic skills that contribute most to the research effort. Two basic skills are required, in addition to those acquired as part of the approved plan of study. Once the basic skills requirement has been determined, the courses providing these basic skills are selected. These courses may come from one or more departments if the topical unity of the area is preserved. The student submits the choice of skills and list of courses, with the major professor's signature, to the graduate studies committee of the department for approval. Competence is demonstrated by the satisfactory completion of the courses. Possible areas that might be selected for development of basic skills are

1. Foreign language. This skill can best be obtained by taking the two-course sequence in the selected language. If the student has sufficient skill from previous study, the graduate studies committee arranges for an examination.

2. Computer skills. This requires completion of course work providing the necessary computer skills and preparation of a program to be submitted to the major professor for approval in an area associated with the proposed research program. This can include digital, analog, or hybrid computers.

3. Mathematical skills. This can include courses such as matrices and determinants, probability and statistics, and numerical analysis.

4. Laboratory techniques. This relates to special laboratory techniques not acquired as part of the approved course program.

5. Physical and biological science skills. This can include any special skills in either the physical or the biological sciences that the major professor determines necessary for accomplishing the proposed research in environmental engineering or science.

6. Other special skills. It is not intended that the above five areas be the only ones acceptable for special research skills. The graduate studies committee will review any logical plan for the development of competence in basic research skills proposed by the aspirant and concurred with by the major professor.

Candidates for the Ph.D. degree must also satisfy all Graduate School requirements for the degree.

D.E. Degree Requirements. Requirements for the Doctor of Engineering degree with a major in civil engineering are in accordance with the requirements of the School of Engineering for the Doctor of Engineering degree.

Architectural Engineering

Chair: Thomas E. Glavinich, archengr@ku.edu,
2006 Learned Hall, (785) 864-3766, www.arce.ku.edu

The Master of Science in Architectural Engineering, and the Master of Construction Management are offered. Some faculty members are authorized to chair doctoral committees for other KU engineering departments. Full-time faculty members have doctoral degrees and experience in their specialties. Almost all have professional engineering registration.

Architectural engineers analyze, design, and construct the increasingly complex engineered systems for buildings. At KU, you can study in depth one of the following areas of architectural engineering or construction practice: building mechanical systems, building power systems, construction management, energy management, or illumination engineering.

More information about the department, graduate programs, financial aid, and admission requirements is available on the Web site. Request printed information and application materials online, or write to the depart-
ment. Be sure to describe your undergraduate degree and whether you need a domestic or international student application packet.

Admission to the M.S. in architectural engineering program ordinarily requires an ABET-accredited Bachelor of Science in engineering degree, or the equivalent from abroad. The M.C.M. program is for part-time graduate students in the Kansas city area who have such undergraduate degrees as architecture, engineering, technology, construction, and business.

For regular admission status, an overall grade-point average of 3.0 or better on a 4.0 scale is needed. Probationary or provisional admission may be given to applicants with lower grade-point averages.

Graduate Record Examination scores are required and are used in the evaluation process, but minimum scores for admission have not been established. The GRE engineering and other subject examinations are not required. The Test of English as a Foreign Language is required for international applicants. To speed processing of your application, study for and take the GRE and the TOEFL as soon as possible.

Degree Programs. KU’s M.S. in architectural engineering degree program is popular with graduates of other engineering disciplines (i.e., civil, mechanical, electrical, or chemical engineering) who wish to enter the building design and construction field, and with design engineers from abroad who seek education and/or employment in the United States. Architectural engineering bachelor’s degree holders also pursue the M.S. to enhance their knowledge and skills. M.S. graduates typically become consulting engineers or construction managers, or continue their studies toward doctoral degrees at KU or elsewhere.

The Master of Construction Management is a nonengineering professional degree that prepares its graduates for careers in construction. Many students have full-time positions with companies in the area and complete their degree requirements part time.

Most of the department’s nonconstruction graduate courses are offered at KU’s main campus in Lawrence. The graduate construction management courses are offered in the evenings at KU’s Edwards Campus in Overland Park, Kansas, a southern suburb of Kansas City. Tuition and fee structures differ for the two campuses. Also, students living near one campus but completing courses at the other may need to provide their own reliable transportation.

For both programs, each student develops an individualized plan of study with a course/research advisor. This adviser normally is selected in the first semester. Provisional or probationary students and international students with English language deficiencies may have additional course requirements.

M.S. Degree Requirements. The M.S. in Architectural Engineering degree requires 30 credit hours; thesis and report options are available. The thesis option requires 24 credit hours of graduate course work and 6 hours of master’s thesis. The report option requires 27 credit hours of graduate course work and 3 hours of master’s project. An especially well-prepared student, with a high grade-point-average or a five-year B.S. in ARCE degree, may petition the Graduate School through his or her adviser to reduce the total credit-hour requirement to as low as 24.

M.C.M. Degree Requirements. The M.C.M. degree requires 33 credit hours. Eighteen hours of core courses, 12 hours of electives, and 3 hours of master’s project are required. Most students complete all lecture course requirements on the Edwards Campus.

Financial Aid. Most students support themselves, but some have partial financial support. Research assistanships may be available through funded research projects. A teaching assistantship is occasionally available in the department, and matriculated full-time students often seek teaching assistantships in KU’s mathematics, physics, chemistry, and other departments. Students are encouraged to apply for Graduate School, private, and governmental grants. Some students obtain full- or part-time employment on campus or with private engineering or construction firms in the region. The greater Kansas City area is a major center of consulting engineering and construction services.

Facilities. Research, study, and meeting spaces are available in Learned Hall, Broadcasting Hall, and the department’s laboratories in Lawrence. The Spahr Engineering and Anschutz Libraries are nearby. Microcomputers, access to mainframe computers and the Internet, and wood- and metal-working shops are available. The department has teaching and graduate research laboratories for electric power and acoustics; illumination; and HVAC, controls, and solar energy. Some recent master’s research topics were in energy conservation, indoor air quality, direct-digit control of HVAC systems, and construction practices.

Architectural Engineering Courses

ARCE 551 Construction Costs and Methods (3).
ARCE 561 Building Mechanical Systems for Architects (3).
ARCE 630 Statics for Architects (2).
ARCE 631 Strength of Materials for Architects (2).
ARCE 632 Strength of Materials Laboratory for Architects (1).
ARCE 633 Structural Systems for Architects (3).
ARCE 634 Analysis and Design of Structures for Architects (3).
ARCE 642 Fundamentals of Illuminating Engineering (3).
ARCE 644 Daylighting analysis and Design (3).
ARCE 645 Power System Design I (3).
ARCE 648 Power System Design II (3).
ARCE 660 Building Thermal Science (3).
ARCE 661 HVAC&R Systems Design (3).
ARCE 663 Energy Management (1).
ARCE 664 Plumbing, Piping, and Fire Protection Engineering (3).
ARCE 665 Solar Energy Systems Design (3).
ARCE 670 Building Power Systems for Architects (1).
ARCE 672 Building Interior Lighting for Architects (1).
ARCE 675 Architectural Acoustics (3).
ARCE 676 Building Acoustical Systems for Architects (1).
ARCE 680 Architectural Engineering Design I (6).
ARCE 681 Architectural Engineering Design II (6).
ARCE 690 Special Problems (1-3).
ARCE 691 Honors Research (3).
ARCE 700 Directed Readings in Architectural Engineering (1-3).

Some recent master’s research topics were in energy conservation, indoor air quality, direct-digit control of HVAC systems, and construction practices.
Civil, Environmental, & Architectural Engineering

ARCE 743 Space and Light Theory in Architecture (3). This lecture/laboratory course focuses on the mutual interaction of architectural space and light. Taught from an ergonomic viewpoint, it demonstrates how the physical spaces of the built environment are modified by illumination as perceived by the human visual system. It includes the behavior of color, texture, and reflectance under electric and natural light, and the resultant impact on the visual perception of architectural space. The course is open to students of architecture, interior design, stage lighting design, and architectural engineering. (Same as ARCH 739.) Prerequisite: MATH 115 or MATH 124, PHYS 114 or PHYS 121, graphics course, or consent of instructor. LEC

ARCE 745 Power Systems Analysis I (3). Introduction to the analysis of commercial, industrial, and utility power systems. Emphasis is placed on modeling system components which include circuits, transformers, induction machines, and synchronous machines and the development of a power system model for analysis from these components. System modeling will be applied to short-circuit studies and used to analyze symmetrical faults, to develop sequence networks using symmetrical components, and analyze unsymmetrical faults. Prerequisite: ARCE 645 or consent of instructor. LEC

ARCE 748 Power Systems Analysis II (3). A continuation of ARCE 745 that uses power system modeling to analyze power system load flow, operation, stability, transient response, harmonics, and reliability. Conductor capacity calculations, economic conductor selection, and insulation coordination are also introduced. Prerequisite: ARCE 745, ARCE 527, and MATH 520. LEC

ARCE 749 Power System Protection (3). This course introduces techniques and methods used to analyze and predict the performance of commercial and industrial power systems and equipment under faulted conditions. Emphasis is placed on the selection, application, and coordination of protective devices to detect and clear power system faults in a safe and reliable manner. Prerequisite: ARCE 749 or consent of instructor. LEC

ARCE 750 Construction Project Management (3). An introduction to the management of construction projects. This course addresses project delivery systems, project organization, estimating and bidding, planning and scheduling, legal and safety issues, among other topics. (Same as CE 759.) Prerequisite: Graduate standing or consent of instructor. LEC

ARCE 751 Construction Planning and Scheduling (3). An introduction to the planning and scheduling of projects both construction and planning. Emphasis is placed on the critical path method including network development, production of time schedules, time-cost consideration, and efficient utilization of equipment. Manual and computer techniques are discussed. (Same as CE 741.) Prerequisite: ARCE 450/CE 440 or ARCE 750/CE 740, and MATH 526 or EMGT 802, or consent of instructor. LEC

ARCE 752 Construction Equipment (3). This course introduces the student to the multitude of construction equipment employed today. The underlying technology and engineering principles are reviewed. Principles of equipment selection, equipment utilization, and equipment economic analysis are presented. (Same as CE 742.) Prerequisite: ARCE 450/CE 440 or ARCE 750/CE 740, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806, or consent of instructor. LEC

ARCE 753 Construction Quality, Productivity, and Safety (3). Operations analysis for work improvement in construction using process charts, crew balancing, time-lapse photography, and planning techniques. Inspections, accident prevention, and safety management. (Same as CE 743.) Prerequisite: ARCE 450/CE 440 or ARCE 750/CE 740, and MATH 526 or EMGT 802, or consent of instructor. LEC

ARCE 754 Construction Estimating and Bidding (3). A study of the quantity survey, cost estimating, scheduling, and project controls; construction operations; and methods of building construction. (Same as CE 744.) Prerequisite: ARCE 450/CE 440 or ARCE 750/CE 740, and MATH 526 or EMGT 802 and ARCE 357 or EMGT 806, or consent of instructor. LEC

ARCE 755 Construction Contracts, Bonds, and Insurance (3). Legal doctrines relating to owners, design professionals, and contractors. Sources of law, forms of association, and agency. Contract formation, rights and duties, interpretation, performance problems, disputes, and claims. Surety bonds and insurance. (Same as CE 745.) Prerequisite: ARCE 450/CE 440 or ARCE 750/CE 740 or consent of instructor: LEC

ARCE 758 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: ARCE 752/CE 742, and ARCE 754/CE 744, or consent of instructor. LEC

ARCE 759 Construction Seminar (3). In-depth study of a special or contemporary issue in construction. Prerequisite: ARCE 450/CE 440 or ARCE 750/CE 740 and other prerequisites as required by instructor. LEC

ARCE 760 Automatic Controls for Building Mechanical Systems (3). An introduction to controls for building mechanical systems. Discus- sions of the theory, design, and equipment used for control systems. The benefits of pneumatic, electrical, and electronic (DDC) controls will be examined. Prerequisite: ARCE 660 or consent of instructor. LEC


ARCE 775 Advanced Architectural Acoustics (3). Advanced analysis of the physics of sound. Objective and subjective evaluation and control of sound as applied to architectural spaces. Room shaping, mechanical and electrical systems in noise and vibration control, and electro-acoustic sound reinforcement. Prerequisite: ARCE 675 or consent of instructor. LEC

ARCE 890 Architectural Engineering Seminar. (1-3). Individual or group studies in building engineered systems or construction engineering. Prerequisite: Graduate standing in Architectural Engineering and consent of instructor. RSH

ARCE 895 Master's Project (1-3). Directed study and reporting of a specialized topic of interest to the architectural engineering profession. Prerequisite: Consent of instructor: RSH

ARCE 899 Master's Thesis (1-6). Directed research and reporting of a specialized topic of interest to the architectural engineering profession. Prerequisite: Consent of instructor: RSH

Civil Engineering Courses


CE 710 Structural Mechanics (3). Basic concepts in the analysis of stress and strain and the behavior of materials. Topics include elementary theory and problems in elasticity, theories of failure of materials including fracture mechanics and introduction to plasticity. LEC

CE 721 Experimental Stress Analysis (3). Introduction to experimental stress-analysis techniques. Theory and application of mechanical strain gages, electrical strain gages, photoelastic techniques, and brittle coatings. LEC

CE 725 Multivariate Statistical Methods (3). The emphasis of this course is on the solution of typical engineering and science-related problems drawn from real-world situations. Topics covered include: the use of various multivariate statistical and graphical computer software packages; eigenvectors; principal component analysis; factor analysis; discriminant analysis; multivariate regression; logistic regression; experimental design; MANOVA; and cluster analysis. The course involves the preparation and presentation of information gathered by the student on assigned topics. Prerequisite: CE 625 or equivalent or consent of instructor. LEC

CE 730 Intermediate Fluid Mechanics (3). Fall semester. Principles of steady and unsteady flows, theories of potential, viscous, and turbu- lent flows, and applications in water resources engineering. Prerequi- site: CE 330 and MATH 320. LEC

CE 740 Construction Project Management (3). A discussion of the management aspects of construction projects and office organization. Emphasis is given to financial management and topics include the actual cost of money, financial analysis, cost control and factors involved in the purchase and use of equipment. (Same as ARCE 750.) Prerequi- site: ARCE 650 or CE 650, and/or consent of instructor. LEC

CE 741 Construction Planning and Scheduling (3). An introduction to the planning and scheduling of projects both construction and design. Emphasis is placed on the critical path method including network
development, production of time schedules, time-cost consideration and efficient utilization of equipment. Manual and computer techniques are discussed. Prerequisite: ARCE 750 or ARCE 450, and MATH 526, or consent of instructor. LEC
CE 742 Construction Equipment (3). This course introduces the student to the multitude of construction equipment employed today. The underlying technology and engineering principles are reviewed. Principles of equipment selection, equipment utilization and equipment economic analysis are presented. (Same as ARCE 752.) Prerequisite: ARCE 450 or graduate standing. LEC
CE 743 Work Management in Construction (3). Operations analysis for work improvement in construction using process charts, crew balancing, time-lapse photography, and planning techniques. Regulations, accident prevention, and safety management. (Same as ARCE 753.) LEC
CE 744 Construction Estimating and Bidding (3). A study of the quantity survey, cost estimating, scheduling and project controls; construction operations and methods of building construction. (Same as ARCE 754.) Prerequisite: ARCE 750, or ARCE 450, and MATH 526, or consent of instructor. LEC
CE 745 Contracts, Bonds, and Insurance (3). Legal doctrines relating to owners, design professionals, and contractors. Sources of law, forms of association, and agency. Contract formation, rights and duties, interpretation, performance problems, disputes, and claims. Surety bonds and insurance. (Same as ARCE 755.) LEC
CE 746 Pavement Construction (3). Introduction to the equipment, materials, and construction practices employed in the construction of flexible and rigid pavements and airfield pavements; the relationship of each to pavement design and performance. The principles of statistical based quality control and quality assurance methods and specification writing will be introduced. Prerequisite: CE 484 or CE 412, CE 5 82, and CE 625 or equivalent. LEC
CE 748 Asphalt Technology (3). An introduction to the production of asphalt cements and its use in pavement construction and maintenance applications. Pavement distress identification, Design and use of bituminous materials and materials for other than highway applications. Prerequisite: CE 484 or consent of instructor. LEC
CE 751 Watershed Hydrology (3). Study of hydrologic processes at the earth's surface: evaporation, transpiration, snowmelt, precipitation, infiltration, runoff, and streamflow. Models of hydrologic processes; statistical analysis of hydrologic data; applications to the analysis and design of engineering projects. Prerequisite: CE 450 or equivalent. LEC
CE 753 Chemical Hydrogeology (3). A study of natural groundwater chemistry and an introduction to groundwater contamination chemistry, including discussion of origins and evolution of water and solutes because of speciation, solubility, sorption, ion exchange, and oxidation-reduction processes. Effects on groundwater quality, water-rock interactions (diagenesis), and surface-water interactions are included. (Same as GEOL 753.) Prerequisite: One year of chemistry, one year of calculus, and an introductory course in hydrogeology or equivalent, or consent of instructor. LEC
CE 754 Physical Hydrogeology (3). A study of fluid flow in subsurface hydrologic systems. Investigation of the groundwater environment including porosity, permeability, hydraulic conductivity and their relationship to typical geologic materials. Examination of Darcy's law and the continuity equation leading to the general flow equations. Discussion of typical hydrologic testing methods to estimate aquifer parameters in various situations and the use of these parameters to model future effects. Study of the basic mechanisms that determine the behavior of typical regional flow systems. (Same as GEOL 751.) Prerequisite: Differential Equations and an introduction to Hydrogeology or Fluid Mechanics, or consent of instructor. LEC
CE 755 Free Surface Flow (3). A study of uniform and non-uniform steady flow of water in open channels, including backwater curves, the hydraulic jump, and the delivery of canals. Prerequisite: CE 300. LEC
CE 756 Wetlands Hydrology and Introduction to Management (3). A study of the basic structure and functions of wetlands; the physical, chemical, and biological processes involved; and an introduction to the management of wetlands. Also a brief introduction to the legal aspects of wetlands, the Section 404 permitting processes, and mitigation requirements. Prerequisite: Senior or graduate standing in engineering or a science area, or consent of instructor. LEC
CE 758 Water Resource Policy and Planning (3). An appraisal of federal and state water law, policy and planning processes directed toward the management and protection of water resources, emphasizing the framework linking social, technical, and legal aspects of planning. Prerequisite: CE 450 or equivalent. LEC
CE 761 Matrix Analysis of Framed Structures (3). Analysis of 2-D and 3-D frame and truss structures by the direct stiffness method. Computer techniques required to implement the analysis procedure. LEC
CE 762 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 multiaxial states of stress; moment-curvature analysis; advanced analysis of r/c members subjected to shear (variable angle truss models, modified compression field theory, strut-and-tie models); behavior of r/c members subjected to cyclic loading; modeling and effects of slip at the interface between reinforcing steel and concrete. Prerequisite: CE 563 or equivalent.
CE 763 Advanced Concrete Design I (3). The theory and design of prestressed concrete structures based on service load and strength criteria. Prerequisite: CE 563. LEC
CE 764 Advanced Concrete Design II (3). The theory and design of reinforced concrete members and structures with emphasis on frames and slabs. Introduction to bridge design and earthquake design. Prerequisite: CE 563. LEC
CE 765 Advanced Steel Design I (3). The theory and design of standard steel framed structures (primarily buildings), and the relationship of each to design and performance. The principles of statistical based quality control and quality assurance methods and specification writing will be introduced. Prerequisite: CE 484 or CE 412, CE 5 82, and CE 625 or equivalent. LEC
CE 770 Concepts of Environmental Chemistry (2). The fundamentals of aquatic chemistry, with emphasis on application to water purification and wastewater treatment. May not be taken for credit by students with credit in CE 570. Prerequisite: CE 477 or equivalent, calculus, and five hours of chemistry. LEC
CE 771 Environmental Chemical Analysis (1). A laboratory introducing the basic chemical tests used in the water and wastewater fields of environmental engineering and science. May not be taken for credit by students with credit in CE 571. Prerequisite: Credit or co-enrollment in CE 770. LAB
CE 772 Physical Principles of Environmental Engineering Processes (3). Physical principles of suspensions, kinetics, fluid flow, and gas transfer are applied to various environmental physical processes. Prerequisite: CE 477 or equivalent, calculus, and four hours of physics. LEC
CE 773 Biological Principles of Environmental Engineering (3). A basic study of the microorganisms of importance in environmental engineering. Emphasis is placed on the microbiology of dilute nutrient solutions. Microbial physiology, microbial ecology, and biochemistry will be discussed as they pertain to environmental engineering and science. Both 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 573. Prerequisite: CE 477 or equivalent, calculus, and five hours of chemistry. LEC
CE 774 Chemical Principles of Environmental Engineering Processes (3). Chemical principles of stoichiometry, thermodynamics, and kinetics are applied to various environmental processes having application in the field of environmental engineering and science, including adsorption, ion exchange, coagulation, oxidation, and precipitation. Prerequisite: CE 477 or equivalent, calculus, and credit 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. Special emphasis is placed on problems of worldwide occurrence, international law, 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 776 Contaminant Transport (3). A study of the transport of conservative and non-conservative contaminants in subsurface waters. Case studies are used to illustrate and develop a conceptual understanding of such processes as diffusion, advection, dispersion, retardation, chemical reactions, and biodegradation. Computer models are devel-
op ed and used to quantify these processes and gain an appreciation of modeling limitations. (Same as GEOL 754). Prerequisite: Introductory course in hydrology and familiarity with computer use, and consent of instructor. LEC

CE 777 Industrial Water and Wastes (3). A review of the methods of industrial water treatment and the fundamentals of industrial wastewater treatment and control. Topics include: water budgets, cooling tower and boiler treatment, corrosion control, technical review, water characterization, wastewater minimization, pilot plants, pretreatment, final treatment, and site selection. 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 pollutant sources, effects, meteorological factors, measurements, modeling approaches, legislation and controls associated with air quality problems. Students work on problems drawn from typical industrial situations, and use models to address specific air pollutant scenarios. Prerequisite: CE 477 or equivalent, or an M D Math 115 or MATH 121. LEC

CE 779 Water Quality (3). Examination of water quality principles, policy, processes, practices, computer programs, laws and regulations as they relate to the integrated planning and control of point and non-point sources of pollution. Prerequisite: MATH 121 or equivalent, CE 477, and CE 570 or CE 770. LEC

CE 781 Traffic Engineering I: (Traffic Characteristics and Studies) (3). Two lecture periods and one laboratory period. A study of fundamental traits and behavior patterns of the road user and his or her vehicle in traffic. The major content involves the techniques for obtaining traffic data, analyzing data and interpreting data on traffic speed, volume, streamflow, intersection operation, parking and accidents. Capacity analyses using the most up to date procedures for major traffic facilities such as elevated highways, freeways, interchanges and intersections are also discussed at length. Prerequisite: CE 582 or equivalent. LEC

CE 782 Railroad Planning and Design (3). The comprehensive study of the planning, design, construction, operation, and maintenance of the railroad system, with emphasis on the design aspects of a railroad. Prerequisite: CE 240 and CE 582. LEC

CE 783 Public Transportation (3). A study of the various modes of public transportation from their historical developments to their current operational situations. Emphasis is placed on what to expect in the future from public transportation. Prerequisite: CE 582. LEC

CE 784 Airport Planning and Design (3). A study of the various factors that enter into the design of modern airports including financing, site selection, landing and terminal area requirements, ground transportation system, drainage and the geometric and structural design of runways, taxiways, and aprons. Prerequisite: CE 487 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 including the recognition of soil types and classes, engineering materials surveys, route location, and the delineation of watersheds and estimates of runoff therefrom. Prerequisite: CE 487 or equivalent. LEC

CE 787 Advanced Soil Mechanics (3). Three lecture periods. A study of the strength and compressional characteristics of cohesive and adhesive soils under various loading conditions. Prerequisite: CE 487 or equivalent. LEC

CE 788 Geotechnical Engineering Testing (3). Three lectures. Field testing techniques, sampling methods, and laboratory testing procedures used to determine soil properties for engineering projects. Prerequisite: CE 487. LAB

CE 789 Pavement Management Systems (3). Basic components of pavement management systems. Emphasis is given to pavement evaluation, planning pavement investment, rehabilitation design alternatives, and pavement management program implementation. Prerequisite: CE 487, CE 484 or equivalent. LEC

CE 790 Special Topics: . (1-3). A course or colloquium to present topics of special interest. LEC

CE 791 Waste Facility Siting and Design (3). A review of current site characterization 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 conclusions (the knowledge base) and the reasoning process used to draw conclusions (the inference mechanism). A wide variety of applications are addressed including civil, chemical, petroleum, computer, and aerospace engineering. Prerequisite: Computer literacy, bachelor's degree in engineering, or consent of instructor. LEC

CE 793 Advanced Concepts in CADD (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 CADD programming languages, and relating CADD and other civil engineering based programs. An engineering approach 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 graduate level course with emphasis on selecting a research topic and preparing a thesis or special problem report, technical reports, oral presentations, papers, and grant proposals. 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 electron optics, electron beam-specimen interaction, 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. Prerequisite: PHYS 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 approximate solution methods based on the displacement method. LEC

CE 801 Energy Methods (3). The methods of analysis by energy methods of mechanics problems. Includes variational energy principles, calculus of variations, stationary energy and complementary energy principles, and the method of virtual work. Applications. Prerequisite: CE 310 and MATH 320. LEC

CE 802 Nondestructive Evaluation of Materials and Structures (3). This course covers nondestructive methods and their application to engineered structures and components. Methods covered include: ultrasonic testing, acoustic emission, vibration, impact-echo, visual inspection, and frequency response. LEC

CE 810 Theory of Elastic Stability (3). Buckling of columns in the elastic or hyperelastic 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 methods for determining engineering properties of bituminous pavements. Asphalt 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 programs. Analysis of bridge scour using FHWA methods is also considered. Prerequisite: CE 755. LEC

CE 856 Wetland Design, Engineering, and Management (3). Introduction of design concepts in creating and restoring wetland systems. Review of wetland hydrology and hydraulics. Interaction of wetland hydrology, soils, and vegetation providing environmental benefits. Considerations in project planning, site selection and preparation, construction and operation, and maintenance. Use of state and local legal and management tools to protect and restore wetlands. Emerging concepts of mitigation and banking. Prerequisite: CE 756 or equivalent. LEC

CE 857 Sediment Transport (3). A study of the transport of sediment in alluvial channels. Special topics include the mechanics of bed forms, particle entrainment, scour analysis, prediction of suspended load and bed load, design of stable channels and diversion works, and sedimentation of reservoirs. Prerequisite: CE 756 or consent of instructor. 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 formulations and behavior with emphasis on the isoparametric concept. Computer modeling and interpretation of results. Introduction to material and geometric nonlinear 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 earthquake events. Emphasis is placed on estimating the response of building structures as represented by simple and complex models. Topics covered include strong ground motion, response of simple structures to ground motion, nonlinear response of 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 704 or equivalent. 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 physiology as they relate to the degradation of environ-
ment contaminants. Emphasis is placed on the interrelationship between the physiological traits or microorganisms, and the physical and chemical properties of the contaminant 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 environmental monitoring techniques, regulations, and systems. Dimensions of environmental monitoring will be considered for air, soil, and water measurements. The major emphasis will be on monitoring techniques and their principles, utility, and limitations. LEC

CE 874 Air 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 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 578 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 for 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 air quality models, 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 II: (Traffic Operations and Management) (3). Two lecture periods and one laboratory period. A study of theory and practical applications of a number of traffic operational and management tools to achieve the convenient, safe and efficient movement of people and goods in urban street networks. Prerequisite: CE 781 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 involves 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, for both rigid and flexible 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 Structure and Mechanics (3). Current theory and practice relating to the design of retaining walls, earth slopes, large embankments, and landslide mitigation. Application of geotextiles to the design of earth retaining structures and slope stabilization. Prerequisite: CE 588 or consent of instructor, LEC

CE 890 Advanced Special Problems (1-5). A directed study of a particular complex problem in the area of civil engineering or allied field. This course is for graduate students only, RSH

CE 891 Special Problems in Mechanics (1-3). 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 893 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, RSH

CE 894 Advanced Topics in Traffic Engineering II (1-3). A course of colloquium to deal with advanced concepts and topics in environmental engineering and science. Prerequisite: Graduate standing in the environmental engineering and science programs, LEC

CE 895 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 UBPL 750, or equivalent, LEC

CE 896 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

Electrical Engineering and Computer Science

Interim Chair: Sam Shanmugan
Snow Hall, 1460 Jayhawk Blvd., Room 415
Lawrence, KS 66045-7523
(785) 864-4620; fax: (785) 864-3226
www.eecs.ku.edu

Graduate Studies Director: John M. Gauch,
434 Snow Hall, (785) 864-8619

Professors: Demarest, Evans, Frost, Gogineni, Grimmala-Busse, Minden, Pet, Prescott, Roberts, Rowland, Saeidian, Shanmugan, Tsatsoulis

Professors Emeriti: Ambler, Daugherty, Dean, Moore, Runmer, Schwepe, Smith, Talley, Unz, Wallace

Associate Professors: Agah, Alexander, Allen, Andrews, Brown, Chakrabarti, J. Gauch, S. Gauch, Hui, Kinnersley, Kong, Miller, Niehaus, Stiles

Associate Professor Emeritus: Doemland

Assistant Professors: James, Lohmeier

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. In addition to degrees offered in Lawrence, the department offers M.S. programs in computer science and
computer engineering at the KU Edwards campus in the Kansas City area.

The department has specific plans of study in engineering of computer-based systems, human-machine interaction, intelligent systems, Internet engineering, principles of communication networks, remote sensing, software engineering, and telecommunication systems engineering. Class lists and teaching schedules are available in the graduate office or on the department Web site. Other plans of study can be constructed, in conjunction with a faculty adviser, 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 (if available) graduate course work, by suitable aptitude test scores on the Graduate Record Examination, and by academic letters of reference. The GRE requirement can be waived where other data are unusually strong.

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 that normally required by the Graduate School. Applicants for graduate teaching assistantships must obtain a satisfactory score on the Test of Spoken English.

The application deadline for fall admission is March 1. The deadline for spring admission is October 1. For full consideration for fellowships and assistantships, applications should be submitted two months before these deadlines. See page 137 for application fees.

Submit your application to the Graduate School online at www.graduated.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Office
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.S. Degree Requirements
The M.S. degree programs in electrical engineering, computer engineering, and computer science require a minimum of 30 credit hours of approved graduate course work and offer thesis and nonthesis options. 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 a conference proceedings or a professional journal. The nonthesis option requires a project that demonstrates the student's ability to design and build hardware or software systems or system models using current EECS tools or techniques. M.S. projects are not required to address an open research question and typically require one semester.

Central to each program is the development of each student's plan of study. The plan must be approved by a committee of three EECS Graduate Faculty members, one of whom serves as the student's thesis or project adviser. The plan must be developed and submitted to the graduate office during the first semester. The plan describes all course work to be taken and designates the option to be followed. Selection of courses is flexible. The student may select a set of required courses from one of several predefined areas or, working in conjunction with an adviser, customize the course selection. A current list of the areas and their requirements is available from the graduate office. The three EECS Graduate Faculty members who approve the plan verify that courses selected meet the guidelines and are appropriate for the M.S. degree program (CS, CoE, EE). Modifications to the plan must be approved by the student's committee and submitted to the graduate office.

The course work must include a minimum of 15 credit hours of EECS courses numbered 700 or higher, excluding EECS 801 Directed Graduate Readings, EECS 891 Graduate Problems, and EECS 899 Master's Thesis or Report. A maximum of 9 hours outside the department and a maximum of 6 hours numbered below 700 may be counted toward the 30 hours required for the degree. Courses numbered below 500 do not count toward the degree. All plans of study must include at least one semester of EECS 802 EECS Colloquium.

Subject to the general restrictions on M.S. course work, the thesis option requires a minimum of 24 semester credit hours of course work approved in a plan of study, 3 to 6 credit hours of EECS 899 Master's Thesis or Report, and a general oral examination. For students completing the thesis option, EECS 891 Graduate Problems does not count toward the 30 hours required for the degree. Before thesis work begins, the student selects a thesis adviser who is a Graduate Faculty member of the department. Subject to the general restrictions on M.S. course work, the nonthesis option requires a minimum of 27 semester credit hours of course work approved in a plan of study, 3 credit hours of EECS 891 Graduate Problems, and a general oral examination. For students completing the nonthesis option, EECS 899 Master's Thesis or Report does not count toward the 30 hours required for the degree. Before thesis work be-
the course work requirement can be approved by the department. The general oral examination must be taken in the last semester. It is conducted by an examining committee consisting of the thesis or project adviser and at least two other Graduate Faculty members of the department selected by the student and adviser. The committee determines if the written thesis or report, oral presentation of research, and general knowledge of the discipline meet the department's standards.

**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.

Within 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 department.

Each doctoral student must pass a doctoral qualifying examination. It 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 in the discipline. The examination is offered once a year, in the fall semester, and the student must take it at the first opportunity after completing the M.S. or after initial enrollment in the doctoral program. If failed, 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. program, at least 96 hours of graduate course work, specified by the committee, are required. These hours 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 the course work 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 requirement 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 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 skill 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 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 then 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 (3).
- EECS 562 Introduction to Communication Systems (4).
- EECS 580 Electrical Energy Conversion (3).
- EECS 603 Information Processing with C++ (3).
- EECS 611 Noise Reduction in Electronic Systems (3).
- EECS 622 Microwave and Radio Transmission Systems (3).
- EECS 625 Introduction to Radar (3).
- EECS 628 Fiber Optic Communication Systems (3).
- EECS 644 Introduction to Digital Signal Processing (3).
- EECS 645 Computer Architecture (3).
Career opportunities for engineers include a wide range of positions with business, industry, and government.

The Anschutz Library brings together scientific resources from many areas.

EECS 647 Introduction to Database Systems (3).
EECS 649 Introduction to Artificial Intelligence (3).
EECS 660 Fundamental of Computer Algorithms (3).
EECS 662 Programming Languages (3).
EECS 663 Introduction to Communication Networks (3).
EECS 665 Compiler Construction (3).
EECS 670 Introduction to Semiconductor Processing (3).
EECS 672 Introduction to Computer Graphics (3).
EECS 678 Introduction to Operating Systems (3).
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 engineering, computer engineering, or computer science, given as the need arises. May be repeated for additional credit. Prerequisite: Variable. 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, bound and power planes, layer stacking, substrate materials, terminations, bias, component issues, clock distribution, cross-talk, filtering and decoupling, shielding, signal launching. 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 computability properties. Emphasis on context-free, deterministic context-free and regular languages. Prerequisite: EECS 510 or EECS 805 or equivalent. LEC
EECS 720 Electromagnetics for Communications and Radar (3). Topics in electromagnetics relevant to wireless communications, optics and fiberoptics, radar, and remote sensing. Subjects covered include space waves, guided waves, radiation and antennas, scattering, electromagnetic properties of materials, and optics. Prerequisite: EECS 420 or equivalent. LEC
EECS 723 Microwave Engineering (3-4). 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 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. Mechanical theorem-proving for the first-order predicate calculus are studied in depth. Includes resolution, semantic resolution, hyper-resolution, linear resolution, and paramodulation. Applications of these procedures to areas such as proofs of program correctness, deductive question answering, problem solving, and program synthesis. Prerequisite: EECS 730 and a knowledge of mathematical logic equivalent to that supplied by EECS 210. Inexpensively offered. 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 transforms, 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, image segmentation, line-drawing 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 basics of digital video, capture and encoding, digital video data compression, video decoding and display, video display devices, digital video image processing, digital video coding, and digital video compression. Prerequisite: EECS 672 or EECS 744. LEC
EECS 744 Digital Signal Processing I (3). Discrete Fourier transforms, design of digital filters, fast Fourier transform algorithms, and its application to signal processing, description of DSP chips and introduction to quantization error. Prerequisite: EECS 360. LEC
EECS 749 Knowledge-Based Systems (3). General concepts of intelligent problem solving, rule-based systems, reasoning under uncertainty, associative networks, model-based reasoning blackboards, object-oriented systems, case-based reasoning, induction, neural network systems, and knowledge representation in both first-order logic and CE 792. Prerequisite: EECS 649, EECS 730, or equivalent. LEC
EECS 750 Operating Systems (3). An analytical treatment of the structures and theoretical foundations of operating systems and related systems, and of their design and implementation. Cooperating and distributed processes, memory and store management strategies, resource sharing and queuing, concurrency control, and system protection and security. Other topics such as design methodologies, fault tolerance, languages for distributed programming, and communication protocols will also be discussed. Prerequisite: EECS 678, and one of EECS 461, MATH 526, or MATH 627, LEC
EECS 752 Concurrent Software Systems (3). Introduction to 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 645 and EECS 678. LEC
EECS 755 System Requirements Modeling and Analysis (3). Modern software engineering techniques for modeling and analyzing software systems. Course coverage concentrates on pragmatic, formal modeling techniques that support predictive analysis. LEC
EECS 761 Programming Paradigms (3). An investigation of alternative programming paradigms and their representative effect 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 (3). The relationship between syntactic, static-semantic, and semantic structures. Attributes grammars as models for static-semantic information processing. Survey of operational, denotational, and axiomatic examples. Related static-semantic, semantic, and program language issues. Prerequisite: EECS 662 or EECS 807 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, dynamic programming, backtracking, branch-and-bound, greedy method and heuristics; design and analysis of approximate 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 767 Information Retrieval (3). The objective of this course is to give students a hands-on introduction to information retrieval systems. Classical textural information retrieval systems are studied, followed by presentation of current research in the area. Topics include: file structures, term-weighting schemes, text preprocessing, World Wide Web search engines, multimedia retrieval systems, artificial intelligence applications. Prerequisite: EECS 647 or permission of instructor. LEC
EECS 773 Advanced Graphics (3). Advanced topics in graphics and graphics systems. Techniques for scientific visualization and photorealistic rendering. Ray tracing, radiosity, volume visualization, ray casting, antialiasing, animation. Specialized modeling techniques like particle systems and recursive constructions. Collaborative interaction and visualization. Prerequisite: EECS 672. LEC
EECS 774 Geometric Modeling (3). Introduction to the representation, manipulation, and analysis of mathematical models of physical objects with applications to mechanical computer-aided design and manufacturing (CAD/CAM). Basic geometric analysis tools. Implicit and
parametric representations of curves and surfaces. Curve and surface design and display techniques. Curve and surface intersections. Solid modeling representations and algorithms for multiple access schemes such as FDMA, TDMA, CDMA, and SMDS; mobile satellite, indoor, and radar applications; and current antenna, transceiver, and ESP technology. Prerequisite: EECS 420, EECS 461, and ECE 744 or equivalent.

EECS 823 Microwave Remote Sensing (3). Description and analysis of basic microwave remote sensing systems including radars and radiometers as well as the scattering and emission properties of natural targets. Topics covered include planar wave propagation, antennas, radiometers, atmospheric effects, targets, calibrated systems, and remote sensing applications. Prerequisite: EECS 420 and ECE 622. LEC

EECS 825 Radar Systems (3). Description and analysis of radars of various types. Resolution in angle, range, and velocity. Ambiguities. Return from point and area targets. Detection in the presence of noise and fading. Tracking and MTI. Amplitude measurement. Imaging radars. Prerequisite: EECS 360, ECE 420, and ECE 461. LEC

EECS 838 Advanced Fiber-Optic Communications (3). An advanced course in fiber-optic communications. The course will focus on various important aspects and applications of modern fiber-optic communications, ranging from photonic devices to systems and networks. Topics include: advanced semiconductor laser devices, external optical modulators, optical amplifiers, optical fiber nonlinearities and their impact in WDM and TDM optical systems, polarization effect in fiber-optic systems, optical receivers and high-speed optical system performance evaluation, optical soliton video transmission, SONET & ATM networking, and advanced multi-access lightwave networks. Prerequisite: EECS 628 or equivalent. LEC

EECS 830 Advanced Artificial Intelligence (3). A detailed examination of computer programs and techniques that manifest intelligent behavior, with examples drawn from current literature. The nature of intelligence and intelligent behavior. Development of, improvement to, extension of, and generalization from artificially intelligent systems, such as theorem-provers, pattern recognizers, language analyzers, problem-solvers, question answerers, decision-makers, planners, and learners. Prerequisite: EECS 730. LEC

EECS 833 Neural Networks and Fuzzy Systems (3). Fundamental theory of adaptive systems. Introduction to Artificial Neural Networks (ANN) and learning algorithms, neural computers, pattern classification using neural networks, and hopfield networks. Introduction to fuzzy sets and fuzzy relations, fuzzy-model-based classification and control, fusion of fuzzy models with neural networks, and applications of fuzzy-neural networks in engineering problems. Prerequisite: Permission of instructor. LEC


EECS 844 Digital Signal Processing for Communications and Radar (3). This course focuses on the design and implementation of communication and radar systems using digital signal processing algorithms. Subjects include digital filters, modulation and demodulation algorithms, subsampling techniques, adaptive algorithms for filters and antennas, DSP microprocessors, and other software and radio principles. Prerequisite: EECS 744 or permission of instructor. 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 combined project. Prerequisite: EECS 448 or equivalent. Not open to students who have taken EECS 810. LEC

EECS 849 Multiagent Systems (3). In depth look at the area of multiagent systems (MAS). An intelligent agent is an autonomous software program that exists on a computing device and is modeled as a robot, acts on behalf of a user and has various degrees of the following attributes: reasoning, communication, learning, and mobility. A MAS is a collection of intelligent agents that may collaborate to solve a problem or set of problems, or may be in an adversarial relationship in areas of...
A Directory of Courses appears on pages 5-6 of this catalog.


Electrical Engineering & Computer Science; Engineering Management

limited resources. Prerequisite: One class in Artificial Intelligence, or permission of instructor. LEC

EECS 861 Random Signal Theory (3). An extension of probabilistic modeling introducing random processes (3). A mathematical study of various methods for minimizing (or maximizing) functions. Optimization problem formulation. Linear, nonlinear, integer, dynamic programming. Conditions for optimal points. Convergence of algorithms. Stochastic optimization. Applications to communications network design, error control coding, system modeling, etc. Prerequisite: Graduate standing in the School of Engineering and EECS 861. Infrequently offered. LEC

EECS 963 Information Theory and Coding II (2). Advanced topics in information theory and coding. Current research trends. New developments in error correction coding, data compression, special channels, and combined modulation/coding. Applications from telecommunications, economics, computer science, physics, the biological sciences, and other areas. Lectures by the instructor. Class discussion. Readings from the literature. Student papers and presentations. Prerequisite: EECS 869. LEC

EECS 998 Post-Master's Research (1-6). RSH

EECS 999 Doctoral Dissertation (1-12). RSH

Engineering Management

Director: Robert P. Zerwekh
The University of Kansas Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
(913) 897-8560; fax: (913) 897-8682
http://emgt.ku.edu

Professors: Kraft, Zerwekh
Professor Emeritus: Holtzman
Assistant Professors: Chapin, Keller, 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 within 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.
- Systems and information technology.

All 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 (6-8 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 the general requirements of the Graduate School (a cumulative undergraduate
grade-point average of 3.0 on a 4.0 scale or higher for regular admission and of 2.75 or higher for probationary admission. Applicants must also have at least two years of full-time, post-baccalaureate experience in a technological environment.

A completed application includes the application fee, application form, resume, two original transcripts, and three recommendation forms. International students also must meet English, visa, and financial requirements. Application packets, course schedules, faculty biographical information, and other program information may be requested from the EMGT office or downloaded from our homepage.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 800 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 812 Design Project Management in Professional Practice (3) or EMGT 823 Management of Internal Engineering Projects (3) or EMGT 844 Managing Software Development Projects (3) ........... 3
EMGT 821 Strategic Analysis of Technology Projects ................................. 3
EMGT 830 Case Studies in Engineering Management .............................. 2

Electives (12 hours). These may be drawn from three areas:

1. Engineering Management

EMGT 806 Finance for Engineers .................................................. 3
EMGT 807 Special Topics in Engineering Management (1-4)
EMGT 813 Statistical Analysis and Prediction of Engineering Systems (3)
EMGT 814 Business Development and Marketing of Professional Services (3)
EMGT 825 Management of Innovation (3)
EMGT 826 Quality Management (3)
EMGT 827 Systems Approach to the Design Professional (3)
EMGT 828 Product Marketing for Engineering Managers (3)
EMGT 829 Information Technology for Management (3)
EMGT 830 Environmental Issues for Engineering Managers (3)
EMGT 831 Manufacturing Systems Integration (3)
EMGT 832 Management of Business Intelligence and Security for Strategic Planning (3)
EMGT 833 Special Problems in Engineering Management (1-4)
EMGT 834 Advanced Operations Management (3)

2. Graduate courses from any EMGT-approved technical discipline for which the student meets prerequisite requirements for enrollment—500 to 800 level.


Field Project (3 hours)
EMGT 835 Field Project (M.S.) .................................................. 3

The candidate must pass a final oral examination in which the nonthesis project is defended and the candidate demonstrates a working knowledge of engineering management.

● Engineering Management Courses

EMGT 808 Principles of Engineering Management (3).
EMGT 809 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 812 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, analysis of variance, analysis of time dependence by smoothing, Box-Jenkins method, time series analysis, auto-regressive moving averages and forecasting model. Prerequisite: Skills in probability, statistics, and computer application. LEC

EMGT 813 Design Project Management in Professional Practice (3). Includes planning, organizing, staffing, directing, and controlling design projects. Treats those topics from viewpoints of profit, cost control, client satisfaction, and project team human relations. Also covers delegation, motivation, team building, performance reviews, conflict resolution, and group dynamics. Presents the project manager’s job

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
emgt 841 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 the accounting terminology. the presentation of communication interfaces between engineering managers and the controller’s office are examined as are recent developments in cost accounting. prerequisite: permission of instructor, emgt 806, a course in applied statistics.lec
emgt 821 strategic analysis of technology projects (3). a study of the economic feasibility of engineering projects including the application of break-even analysis, decisions under uncertainty, decision trees, stochastic models, risk vs. return, and forecasting. a study of the financial figures of merit used to evaluate competing engineering projects including the dopt rates of return, is presented. fluctuation tree, stochastic models, risk vs. return, and forecasting. a study of the financial figures of merit used to evaluate competing engineering projects including the application of break-even analysis, decisions under uncertainty, deci-
emgt 823 management of internal engineering projects (3). the purpose of this course is to introduce the student to all aspects of managing a project within an organization. the course will focus on how to manage project scope, schedule, budget, and resources using personal computer 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 as applicable to engineering managers in the production or operations-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 product. prerequisite: admission to a graduate 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. rsh
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. the course will focus on how to manage project scope, schedule, budget, and resources using personal computer software. a semester project is required presenting an example of project management or investigating some aspect of project management in detail. 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 together with project planning, risk control and measurement technologies. the techniques 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 technology (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 development, 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 of the environment is presented followed by dis-
mgt 854 management of business intelligence and security for strategic planning (3). management of competitive intelligence and security in business strategic planning is a first course at the graduate level that introduces the formal methods, concepts, and processes of competitive intelligence and security which are 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 business environment including legislation, economics, regulatory changes, competition, 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
No graduate program in engineering physics is offered. The courses listed below are applicable toward degrees in related areas.

**Engineering Physics Courses**
EPHX 501 Honors Research (1-4).
EPHX 516 Physical Measurements I (3).
EPHX 521 Mechanics I (3).
EPHX 531 Electricity and Magnetism (3).
EPHX 536 Electronic Circuits and Measurements (3).
EPHX 601 Design of Physical Systems (3).
EPHX 611 Introductory Quantum Mechanics (3).
EPHX 615 Numerical and Computational Methods in Physics (3).
EPHX 616 Physical Measurements II (3).
EPHX 621 Mechanics II (3).
EPHX 631 Electromagnetic Theory (3).
EPHX 636 Electronics Design (3).
EPHX 641 Introduction to Nuclear Physics (3).
EPHX 655 Optics (3).
EPHX 671 Thermal Physics (3).
EPHX 681 Concepts in Solids (3).

**Mechanical Engineering**
Chair: Ronald L. Dougherty
Learned Hall, 1530 West 15th St., Room 3013
Lawrence, KS 66045-7609, (785) 864-3181
www.engr.ku.edu/me
Graduate Adviser: Bedru Yimer,
3031C Learned Hall, (785) 864-2982
Professors: Burmeister, Dougherty, Faddis, Surana, Yimer
Professors Emeriti: Baer, Barr, Bauleke, Forman, Gyorog, Reese
Associate Professors: Luchies, Sorem, Ten Pas, Umholtz
Assistant Professors: Fischer, Friis, Maletsky, Wilson
The department offers Master of Science in mechanical engineering, Doctor of Philosophy, and Doctor of Engineering degrees. Areas of study in mechanical engineering include computer-integrated manufacturing, computational mechanics and finite element analysis, heat transfer and thermal-fluid system design, mechanical system design and analysis, robotics and control systems, and biomechanics and biomaterials.

**M.S. Degree Requirements**
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, admission on probationary status is considered on a case-by-case basis.

Submit your application to the Graduate School online at www.graduated.ku.edu. Forward all requested supporting application documents to
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

The department offers a thesis option and a nonthesis option leading to the M.S. degree. The thesis option requires a minimum of 30 credit hours of graduate work, including a thesis for 6 hours of credit. The nonthesis option requires a minimum of 33 credit hours of graduate work, which may include a 3-credit-hour independent investigation.

The M.S. degree student selects an adviser 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 to 15 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 nonthesis-option student who selects the 3-credit-hour independent investigation must do an analytical or experimental study acceptable to the adviser.

A maximum of 6 hours of mechanical engineering courses numbered between 500 and 699 may be included in the program of study. 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.

**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.

The minimum course requirement is 30 credit hours beyond the master’s degree in mechanical engineering or 60 credit hours of course work beyond the bachelor’s degree, if the master’s degree is not sought. A minimum of 12 credit hours of the 30 (or 24 of the 60) must be mechanical engineering courses numbered 700-990 (excluding ME 702, ME 899, and ME 901). A minimum of 9 credit hours of advanced mathematics beyond the bachelor’s degree is required. Following completion of at least 20 credit hours of course
work beyond the master’s degree, the student must pass a comprehensive examination.

The Ph.D. student must demonstrate a 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 skill areas 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 96 credit hours of post-baccalaureate work. The minimum course work requirement is 60 credit hours, which must include:

- Engineering design ................................................................. 9 cr. hrs.
- Engineering management ..................................................... 9 cr. hrs.
- Mathematics ............................................................................ 9 cr. hrs.
- Computer science ................................................................. 9 cr. hrs.
- Computer language ............................................................... 6 cr. hrs.
- Literature ................................................................................. 6 cr. hrs.
- Mechanics .............................................................................. 6 cr. hrs.
- Mathematics ............................................................................ 9 cr. hrs.

The remaining 33 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 60-credit-hour total if approved by the advisory committee. A minimum of 24 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:

- Internship ................................................................................. 12 cr. hrs.
- Project ....................................................................................... 24 cr. hrs.

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 must 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**

- ME 501 Mechanical Engineering Design Process (3).
- ME 508 Numerical Analysis of Mechanical Engineering Problems (3).
- ME 510 Fluid Mechanics (3).
- ME 512 Introduction to Thermal Engineering (3).
- ME 520 Dynamics of Machinery (3-4).
- ME 528 Mechanical Design I (3).
- ME 550 Mechanical Engineering Experimentation (2-3).
- ME 590 Special Topics: _______ (1-5).
- 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 656 Thermal System Design (3).
- ME 682 Control Systems (2-3).
- ME 696 Design for Manufacturability (3).
- ME 701 The Finite Element Method for Stress Analysis (3). Introduction to the finite element method for solid mechanics. Finite element formulations for plane stress, plane strain, beams, spars, axisymmetric solids, shells, and 3D solids. Assembly and solutions of finite element equations, computations of stresses and strains and post-processing of results for further use in the design process. Finite element modeling techniques and laboratory sessions for solving actual problems. Prerequisite: ME 508 and ME 528, or equivalent. LEC
- 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 and generalization of the results. Prerequisite: A course in differential equations. LEC
- ME 706 Industrial Robotics (3). Science and engineering of the mechanics and control of industrial robots. Computer, microprocessors, sensors, control components, programming, and manipulation dynamics are included. A laboratory emphasizing robot applications and programming is an integral part of the course. Corequisite: ME 682 or equivalent. 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. Emphasis on human factors, functional design parameters, and microprocessor interfaces. Includes instruction concerning specifications of practical hardware configurations and writing of programs necessary to accomplish mechanical systems applications. Prerequisite: Permission of instructor. LEC
- ME 710 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 711 Bearings and Bearing Lubrication (3). Theoretical aspects of lubrication, determination of pressure distribution in bearings from viscous 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 differential equations. LEC
- ME 712 Advanced Engineering Thermodynamics (3). An advanced course in thermodynamics, mathematical in nature, with emphasis on a critical re-examination of the laws of thermodynamics, thermodynamics of one-dimensional gas flow, development of the classical thermodynamic relations and their application of engineering problems. Prerequisite: ME 508 and ME 550. LEC
- ME 720 Advanced Dynamics of Machinery (3). Dynamics of particles and rigid bodies with advanced engineering applications; generalized coordinates; Hamilton’s principles; Lagrange’s equations; Hamilton-Jacobi theory. Prerequisite: ME 520. LEC
- ME 728 Gas Turbines (3). A comprehensive study of the analysis and design of gas turbine engines for shaft-power and propulsion. Topics include modeling and thermodynamic processes for compression, combustion and expansion, cycle configuration and optimization, and layout of flow path components. Prerequisite: ME 412 or equivalent. LEC
- ME 731 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 732 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 trans-
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 theoretical models for the thermodynamics of gases 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 520 and ME 528. LEC

ME 742 Machine Stress Analysis (3). The determination of stresses in machine parts and the application of mathematical, graphical and mechanical means to such stress analysis. Prerequisite: ME 528 or equivalent. LEC

ME 750 Biomechanics of Human Motion (3). Fundamental 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 assign projects which will result in a poster presentation of basic finite element analysis and bone remodeling simulations. Prerequisite: ME 511 or equivalent. LEC

ME 754 Continuum Mechanics for Soft Tissues (3). An introductory course in the analysis of the mechanical behavior 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 511 or equivalent. LEC

ME 757 Biomechanical Systems (3). A course on the dynamics and motor control of human and animal motion. The course will focus on applying mechanical principles of dynamics, lumped parameter systems, and control theory to problems in biomechanics. Topics include muscle mechanics and dynamics, reflex and voluntary 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 761 Theory of the Finite Element Method (3). Finite element method for solids mechanics, heat transfer, fluid mechanics, and dynamics. Modelling techniques, software implementation, and solution of problems. Prerequisite: ME 508 or equivalent. LEC

ME 763 Introduction to Composite Materials (3). A basic treatment of the analysis, design, and manufacture of fibrous composite materials. Laminated fiber reinforced composite materials are examined in detail. Properties of the constitutive materials are studied. Laminated plate and shell theories are discussed as well as computer applications. Laboratory works consists of the fabrication and testing of various laminated composite specimens. LEC

ME 765 Biometrics (3). An introductory course on biomaterials science and consideration of biomaterials in the design of biomedical implants. Topics include ethical considerations in biomaterials research and the role of the FDA in medical device design are also presented. Prerequisite: ME 306 or ME 346 or equivalent. LEC

ME 770 Conduction 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 (2-3). 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 (3-5). Design and analysis of systems and components, using both individual and team projects. Emphasis on experience in planning, execution and reporting on selected practical engineering situations. Prerequisite: ME 628 or equivalent. LEC

ME 798 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 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 engineering science and technology. Maximum credit toward any degree is three hours unless waived in writing by the departmental chair. Prerequisite: Approval of instructor. RSH

ME 862 Finite Element Method for Transient Analysis (3). Advanced treatment of dynamic and transient response for linear and nonlinear problems in solid mechanics. Formulation and solution of time dependent linear and nonlinear field problems using finite element techniques. Prerequisite: ME 761 or equivalent. LEC

ME 863 Mechanics of Composite Materials (3). An introduction to the basic concepts of the mechanical behavior of composite materials. The mechanics of laminated fiber reinforced composite materials are developed as a continuing example. Prerequisite: ME 528 or equivalent. 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 899 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.) RSH

ME 901 Doctor of Engineering Internship (1-12). A twelve month internship in industry or government for doctoral candidates. The student is supervised by a preceptor at the internship site. Bi-monthly 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 761 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 761 or equivalent. LEC

ME 963 Finite Element Method in Fluid Dynamics (3). One, two, and three dimensional finite element formulation for steady and unsteady isothermal and non-isothermal, incompressible and compressible fluid flows. Finite element formulations for non-isothermal, non-Newtonian flows, and treatment of transport problems. Prerequisite: ME 761 or equivalent. LEC

ME 964 Advanced Topics in the Finite Element Method for Fluid Dynamics (3). Steady state and time dependent finite element formulations for one, two, and three dimensional low and high speed compressible flows, visco-elastic fluid flows, chemically reacting flows, and fluid flows with phase change. Analysis and treatment of singularities, accuracy, stability, and adaptive processes. Prerequisite: ME 963. 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. Thirty 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. RSH
School of Fine Arts

Steven K. Heden, Dean
Murphy Hall, 1530 Naismith Dr., Room 446
Lawrence, KS 66045-3102, (785) 864-3421

Facilities ................................................. 165
GRADUATE STUDIES IN ART & DESIGN .... 166
M.F.A. in Art ............................................... 166
   Admission .................................................. 166
   M.F.A. Degree Requirements ....................... 166
   Art Courses .................................................. 167
   Drawing Courses .......................................... 167
   Painting Courses ......................................... 167
   Printmaking Courses .................................... 167
   Sculpture Courses ....................................... 167
M.F.A. in Scenography .................. 169
M.A. in Visual Arts Education .... 169
   Admission .................................................. 169
   M.A. Degree Requirements ....................... 169
   Visual Arts Education Courses ................. 169
GRADUATE STUDIES IN MUSIC & DANCE ... 170
   Music Courses ........................................... 171
   Dance Courses ........................................... 171
Nonmajors in Performance ........... 171
M.M. Areas in Performance .......... 171
   Admission .................................................. 172
   M.M. Degree Requirements ....................... 172
   Brass ......................................................... 173
      Brass Courses .......................................... 173
      Euphonium Courses .................................. 173
      Trombone Courses .................................... 173
      Trumpet Courses ...................................... 173
      Tuba Courses .......................................... 173
      Tuba-Euphonium Consort Course ................ 173
   Church Music ............................................ 173
      Church Music Courses ................................. 173
      Keyboard .................................................. 173
      Organ Courses ......................................... 174
      Piano Courses .......................................... 174
   Strings ...................................................... 174
      Chamber Music Courses ............................... 174
      Double Bass Courses .................................. 174
      Harp Courses .......................................... 174
      Viola Courses .......................................... 175
      Violin Courses .......................................... 175
      Violoncello Courses ................................. 175
Wind & Percussion .............................. 175
   Bassoon Courses ....................................... 175
   Clarinet Courses ....................................... 175
   Flute Courses ........................................... 175
   French Horn Courses ................................. 175
   Oboe Courses ............................................ 176
   Percussion Courses .................................... 176
   Saxophone Courses .................................... 176
   Wind Ensemble Course ................................ 176
   Voice ....................................................... 176
   Voice Courses ......................................... 176
   Admission .................................................. 177
   M.M. Degree Requirements ....................... 177
GRADUATE STUDIES IN MUSIC theory or Composition ...... 177
   Music Theory & Composition Courses ........... 177
   Admission .................................................. 178
   M.M. Degree Requirements ....................... 178
   Musicology ............................................... 178
   Admission .................................................. 178
   M.M. Degree Requirements ....................... 178
   Conducting ............................................... 178
   Admission .................................................. 178
   M.M. Degree Requirements ....................... 178
   Voice Courses .......................................... 178
   Admission .................................................. 179
   M.M. Degree Requirements ....................... 179
   Wind & Percussion Courses .......................... 179
   Wind Ensemble Course ............................... 179
   Wind Ensemble Course ............................... 179
   J.S. Bach, director of the School of Music, has
   taught at The University of Kansas since 1957.
   His studio. Dr. John Stephens, director of
   the School of Music, has taught at The University
   of Kansas since 1965.

Photo, page 162: John Stephens, professor of
voice, teaches a private lesson in
his studio.
School of Fine Arts

Steven K. Hedden, Dean
Lois Greene, Associate Dean
Murphy Hall, 1530 Naismith Dr., Room 446
Lawrence, KS 66045-3102
Phone: (785) 864-3421, Fax: (785) 864-5387
finearts@ku.edu or www.ku.edu/~sfa

The Graduate Division of the School of Fine Arts includes three departments: the Department of Art, the Department of Design, and the Department of Music and Dance.

The Departments of Art and Design offer graduate programs leading to the Master of Fine Arts degree. The Department of Design also offers a Master of Arts degree with a major in visual arts education.

The Department of Music and Dance 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 Kansas Board of Regents has designated KU as the sole institution in the Regents system authorized to grant doctoral degrees in music. The Doctor of Musical Arts degree is offered in composition, conducting, and many areas of performance. Programs are offered leading to the Doctor of Philosophy degree in music education and to the Doctor of Philosophy degree in music with subspecialties in musicology and music theory.

All applications for admission must be accompanied by a nonrefundable application fee, payable to the University of Kansas. Application fees are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic students applying online</td>
<td>$45</td>
</tr>
<tr>
<td>Domestic students applying on paper</td>
<td>$55</td>
</tr>
<tr>
<td>International students applying online</td>
<td>$55</td>
</tr>
<tr>
<td>International students applying on paper</td>
<td>$60</td>
</tr>
</tbody>
</table>

Contact department offices for information on admission requirements.

Facilities

The Art and Design Building houses all the major programs of the art and design departments. Centrally located on campus, the building contains about 130,000 square feet of floor space. Each program has well-equipped, spacious work areas. As well as studios, the building has photography and filmmaking laboratories, computer and graphic imaging, central shops, an exhibition gallery, and offices.

The Helen Foresman Spencer Museum of Art houses the only comprehensive art collection in the state of Kansas. The 90,000-square-foot building houses museum galleries and offices, an auditorium, the Kress Foundation Department of Art History, and the Murphy Library of Art and Architecture. Collections are particularly noteworthy in medieval art, 17th- and 18th-century German and Austrian painting, sculpture, American painting, prints, American photography, Japanese art of the Edo period, textiles (especially quilts), and decorative arts. Spencer Museum of Art sponsors exhibitions, lectures, films, workshops, and activities that support curricular instruction in the arts. Publications include exhibition and collection catalogs, the Murphy Lectures in Art, the annual Register, and a monthly calendar.

Murphy Hall, named for former KU chancellor Franklin D. Murphy, M.D., houses the Department of Music and Dance, which administers all programs in music and dance. Murphy Hall is a five-level facility with offices for faculty members in applied music, music theory and composition, musicology, opera, and ensembles. It is designed for music and theatre and contains three performance areas: Crafton-Freyer Theatre, William Inge Memorial Theatre, and Swarthout Recital Hall. Crafton-Freyer 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 395-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions. Murphy Hall also houses classrooms, practice rooms, rehearsal halls, and storage for instruments and sheet music; the Electronic Music Studio, which contains exceptional equipment for the composition of electronic music; and an electronic keyboard laboratory.

The new Murphy Hall addition, completed in fall 2000, contains three rehearsal halls for large ensembles, spaces for chamber music rehearsals, classrooms, offices for instrumental ensemble directors and applied faculty members, a recording studio, a sheet music library for instrumental music, a percussion storage and rehearsal room, specialized practice rooms, and instrument storage and repair areas.

The Kansas Center for Music Technology, in Murphy Hall addition, promotes the development and application of current technologies in music instruction, research, and creative projects. The KCMT Computer Center contains 32 fully networked multimedia workstations consisting of PowerMac G4 towers equipped with Korg Triton synthesizers. KCMT has a library of commercially available software for evaluation, experimentation, and integration into existing courses. 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 also helps faculty members and students develop innovative new software. KCMT provides graduate teaching assistantships for applicants with experience in music technology.

The Thomas Gorton Music and Dance Library, in Murphy Hall addition, 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. Enhanced services allow students to 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 are equipped with remote controls, MIDI music keyboards, mini-disk recorders, computers, and video monitors.

The new Opera and Musical Theatre Complex contains a black-box theatre, dressing room and wardrobe area, set construction and storage area, and office and performance control areas. The Music Education and Music Therapy Complex contains a model music education classroom, a general music instruction classroom, large and small therapy clinical spaces, three research spaces, faculty offices, and the Psychology and Acoustics of Music Laboratory. The Music Therapy Clinic, a training and research facility for the music therapy program, is housed in Murphy Hall and Dole Human Development Center.

The Lied Center of Kansas is a 2,020-seat performing arts hall. On KU's west campus at Irving Hill Road and Constant Avenue, it serves as a venue for the Lied Center Series, including the Concert Series, Swar-thou Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and the Lied Family Series. It also presents Department of Music and Dance productions, Student Union Activities shows, and university and community events. The performing arts hall offers excellent acoustic quality and technical production capabilities. The stage features a 56-foot-wide proscenium opening, resilient wood floor, counterweighted rigging system, and ample wing space. There is a full complement of backstage support areas including seven dressing rooms, dance rehearsal studio, two warm-up rooms, a Greenroom, and a production office.

The Dane and Polly Bales Organ Recital Hall, which opened in 1996, 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 Wolff et Associés, one of the finest builders of organs in the world. The hall is available to organ students for practice, lessons, and recitals. The aesthetics of the hall are enhanced by three magnificent stained glass windows designed by Peter Thompson, former dean of the School of Fine Arts.

**Facilities; Art & Design—M.F.A. in Art**

**GRADUATE STUDIES IN ART AND DESIGN**

**M.F.A. in Art**

Chair: Judith McCrea
Graduate Director: Mary Anne Jordan
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531, (785) 864-4401
www.ku.edu/-sfa/art

Professors: Brawley, Carter, Katz, Lubensky, McCrea, Shimomura, Thompson

Professors Emeriti: Gee, Green, Schira, Sudlow, Tefft

Associate Professors: Asbury, Blackhurst, Dishinger, Gillespie, Hachmeister, Hartman, Krueger, Price, Velasco

Associate Professors Emeriti: Burnham, Wright

Assistant Professors: Fortushniak, Nam

**Admission**

By permission of the Kansas Board of Regents, application for admission to graduate programs in the Department of Art 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 15.

To be admitted, students whose major is in art must have undergraduate backgrounds judged by the graduate faculty to be appropriate preparation for the specific specialization selected for graduate study.

A departmental faculty selection and review committee evaluates the transcripts and portfolios of applicants to determine their qualifications for admission. The committee expects applicants to have the B.F.A. degree or equivalent experience in art. The department encourages full-time residence.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

**M.F.A. Degree Requirements**

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, needs 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 con-
sisting 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 membership of the graduate thesis committee must be approved by the graduate director.

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 candidate 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)

Required Courses (60 credit hours)

- Art department electives ................................................................. 12
- Seminar ................................................................. 4
- Thesis ............................................................................. 9
- Directed study III ................................................................. 15
- Graduate-level academic electives ........................................... 11

Art Courses

ART 500 Special Topics in Art: ______ (1-3).
ART 540 Professional Activities Seminar (1).
ART 560 Performance Art (3).
ART 575 Directed Reading in Art (1-3).
ART 598 Special Topics: Studio Theory and Criticism (3).
ART 599 Special Problems in Art (3).
ART 695 Directed Study I (4-5).
ART 696 Directed Study II (5).
ART 801 Directed Study III (5). Individual studio activity under direction of faculty adviser. May be repeated for credit in subsequent semesters. Prerequisite: Permission of graduate program director. RSH
ART 802 Directed Study IV (5). Continuation of Directed Study III. RSH
ART 803 Directed Study V (5). Continuation of Directed Study IV. RSH
ART 805 Graduate Studio (3). Individual graduate studio research in art. Course content to be determined by the student under supervision of a faculty member. May be repeated for credit. Prerequisite: Graduate standing in the School of Fine Arts and permission of instructor. RSH
ART 810 Principles and Practice of Studio Teaching (1). Development of teaching methodology for prospective graduate teaching assistants and current graduate teaching assistants. Required participation in regularly scheduled ABS 101 or ABS 102 course(s) or teaching assignment for regularly scheduled ABS 101 or ABS 102 course(s). Credit earned does not satisfy any credit requirements for a degree. May be repeated for credit. Prerequisite: Permission of instructor plus 12 hours of completed graduate course work. Graded on satisfactory/unsatisfactory basis. RSH
ART 861 Directed Reading in Art (1-3). Prerequisite: Permission of instructor. RSH
ART 899 Special Topics: Studio Theory and Criticism (3). Lecture, discussion, and supervised research in current topics related to contemporary studio theory and criticism. May be repeated for credit as topics vary. This course will be counted as a graduate level academic elective in course and credit distribution. LEC
ART 899 Graduate Seminar (1). Weekly discussion of issues and/or work in art. (Graded on a satisfactory/F basis.) Repeat for credit in subsequent semesters. LEC
ART 906 Graduate Studio (3). Individual graduate studio research in art. Course content to be determined by the student under supervision of a faculty member. May be repeated for credit. Prerequisite: ART 805 and permission of instructor. RSH
ART 950 Thesis in Art (1-6). Original research in art culminating in a thesis exhibition. Repeat for credit. Prerequisite: Thirty-six hours of graduate credit and permission of graduate review committee. RSH

Drawing Courses

DRWG 505 Drawing V (3).
DRWG 506 Drawing VI (3).
DRWG 515 Life Drawing III (3).
DRWG 516 Life Drawing IV (3).
DRWG 518 Life Drawing III, Honors (3).
DRWG 519 Life Drawing IV, Honors (3).
DRWG 535 Special Topics in Drawing: ______ (3).
DRWG 807 Drawing VII (3). Individual research in drawing. Prerequisite: DRWG 506. RSH
DRWG 817 Life Drawing V (3). Individual research in figure drawing. Prerequisite: DRWG 516. RSH
DRWG 908 Drawing VIII (3). Continuation of DRWG 807. Prerequisite: DRWG 807. RSH
DRWG 918 Life Drawing VI (3). Continuation of DRWG 817. Prerequisite: DRWG 817. RSH

Painting Courses

PNTG 565 Painting III (3).
PNTG 566 Painting IV (3).
PNTG 567 Painting III, Honors (3).
PNTG 568 Special Topics in Painting: ______ (1-3).
PNTG 569 Painting IV, Honors (3).
PNTG 585 The Figure I (3).
PNTG 586 The Figure II (3).
PNTG 588 The Figure I, Honors (3).
PNTG 589 The Figure II, Honors (3).
PNTG 667 Painting V (3).
PNTG 668 Painting VI (3).
PNTG 687 The Figure III (3).
PNTG 688 The Figure IV (3).
PNTG 869 Painting VII (3). Individual research in painting. Prerequisite: PNTG 668. RSH
PNTG 889 The Figure V (3). Individual research in the figure and its environment in various media. Prerequisite: PNTG 688. RSH
PNTG 970 Painting VIII (3). Continuation of PNTG 869. Prerequisite: PNTG 869. RSH
PNTG 990 The Figure VI (3). Continuation of PNTG 889. Prerequisite: PNTG 889. RSH

Printmaking Courses

PRNT 523 Printmaking III A (Intaglio) (3).
PRNT 524 Printmaking III B (Lithography) (3).
PRNT 525 Printmaking III C (Serigraphy) (3).
PRNT 526 Printmaking IV A (Intaglio) (3).
PRNT 527 Printmaking IV B (Lithography) (3).
PRNT 528 Printmaking IV C (Serigraphy) (3).
PRNT 570 Special Problems in Printmaking (3).
PRNT 862 Printmaking V (3).
PRNT 863 Printmaking VI (3).
PRNT 802 Special Problems in Printmaking (3). Individual research in printmaking: course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: PRNT 570 and permission of instructor. RSH
PRNT 827 Printmaking VII (3). Continuation of PRNT 863. Prerequisite: PRNT 863. LAB
PRNT 903 Special Problems in Printmaking (3). Individual research in printmaking: course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: PRNT 802 and permission of instructor. RSH
PRNT 928 Printmaking VIII (3). Continuation of PRNT 827. Prerequisite: PRNT 827. LAB

Sculpture Courses

SCUL 565 Sculpture IV (3).
SCUL 568 Sculpture IV, Honors (3).
SCUL 559 Special Problems in Sculpture (3).
SCUL 657 Sculpture V (3).
SCUL 658 Sculpture VI (3).
SCUL 804 Special Problems in Sculpture (3). Individual research in sculpture: course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: SCUL 559 and permission of instructor. RSH
SCUL 859 Sculpture VII (3). Individual research in sculpture. Prerequisite: SCUL 658. RSH
SCUL 905 Special Problems in Sculpture (3). Individual research in sculpture: course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: SCUL 804 and permission of instructor. RSH
SCUL 960 Sculpture VIII (3). Continuation of SCUL 859. Prerequisite: SCUL 859. RSH
M.F.A. in Design

Chair: Tom Beisecker
Graduate Director: Mary Anne Jordan
Art and Design Bldg., 1467 Jayhawk Blvd. Room 300
Lawrence, KS 66045-7535, (785) 864-4401
www.ku.edu/~gfa/dsgn

Professors: Branham, Greene, Havener, R. Kemnitzer, Swindell

Professors Emeriti: Boyle, Dykes, Mann-Coats, Reiber, Schira, Smith

Associate Professors: Dooley, Fitzgerald, Hofstra, Iversen, M. Jordan, Kowalchuk, Lau, Rake, Stanionis, Stone, Varney, Vertacnik, Villeneuve, Westergard, Wong

Associate Professors Emeriti: Brejcha, Valanne

Assistant Professors: Armstrong, Bowman, Hertowski, Hwang, Isozaki, Tveit

Lecturers: Brackett, Hyde, L. Jordan, L. Kemnitzer, Kuhn, Staples, Talleur

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 15.

Students in design must have undergraduate backgrounds judged by the graduate faculty to be appropriate preparation for the specialization selected. These areas are ceramics, industrial design, metalsmithing/jewelry, textile design (weaving, printing, dyeing), and scenography.

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 approximately B 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 to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 two interim reviews before beginning thesis work, the first after 12 hours in the concentration, the second after 24 hours. 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 ................................................................. 6
Directed readings in design .............................................................. 3
Concentration ................................................................................. 24
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
Professional electives outside major area ........................................ 9
Thesis ................................................................................................ 9

The final departmental requirements may be satisfied under one of two options:

1. Presentation of a written thesis and an oral exam.

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 exhibit is required.

● 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 580 Special Problems in Design (1-6).
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. Required of all graduate students. RSH
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 advisor prior to enrollment in the course. RSH
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 F. LEC
ADS 890 Thesis (1-8). For guidance refer to Design department graduate guidelines. RSH

● Ceramics Courses

CER 504 Kilns (3).
CER 505 Clay and Glaze Formulation (3).
CER 506 Production (6).
CER 515 Ceramics Seminar (2-6).
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

● 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 578 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 (3-6).
M.A. in Visual Arts Education

Division Director: Denise Stone  
Graduate Director: Mary Anne Jordan  
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300  
Lawrence, KS 66045-7535  
(785) 864-4401  
Professor Emeritus: Rueschhoff  
Associate Professors: Kowalchuk, Stone, Villeneuve  
Associate Professor Emeritus: Baumgartel  
Assistant Professor Emeritus: Glenn

The graduate program includes advanced professional and scholarly study for art educators and art museum educators, an initial certification program for those with baccalaureate degrees in other fields who wish to enter art education (initial certification work typically also requires collateral undergraduate study), and advanced study for individuals in related disciplines. Details may be found in the visual arts education M.A. handbook, available from the division office.

Admission

Admission requirements for regular status:
1. An appropriate baccalaureate degree to support the individual’s goals for master’s degree study. Students seeking entrance into the graduate initial certification program in art education should have substantial backgrounds in studio art and art history regardless of undergraduate major.
2. An overall undergraduate grade-point average of 3.0 or higher on a 4.0 scale.
3. Two official transcripts.
4. Three letters of recommendation from principals, supervisors, or others who can attest to the applicant’s potential and/or performance as a teacher.
5. Completion of the Graduate Student Information Questionnaire is required. It is available in 300 Art and Design.

Submit your application to the Graduate School online at www.grad.ku.edu. Forward all requested supporting application documents to:
The University of Kansas Graduate School  
Graduate Applications  
1450 Jayhawk Blvd., Room 300  
Lawrence, KS 66045-7535

M.A. Degree Requirements

There are two emphases:

1. Traditional Art Education Emphasis. At least 15 and no more than 18 hours in Visual Arts Education and no more than 20 hours in Fine Arts. 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.

2. Art Museum Education Emphasis. Students take between 21 and 28 hours in Visual Arts Education including an internship and a master’s thesis. Students also take HA 710 Museum Techniques and Functions and one elective course in a related area. This emphasis is intended for the student desiring to teach in the art museum setting. It is also suitable to the practitioner in the classroom who seeks to learn about the art museum.

Thesis Option. The student completes the core and elective requirements and VAE 875 Research in Art Education and an independent experimental, descriptive, historical, or philosophical investigation of a topic related to Visual Arts education.

Project Option. The student completes the core and elective requirements and VAE 875 Research in Art Education. A substantial application of theory, principles, and/or products of Visual Arts education in a pedagogical setting must be documented. This is not an option for the Art Museum Education emphasis.

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 credits 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 or oral final examination. The examination requires students to demonstrate their knowledge of current issues in the field. This is not an option for the Art Museum Education emphasis.

Visual Arts Education Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAE 500</td>
<td>Student Teaching in: _____ (1-4).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 530</td>
<td>Art and Design in Daily Life (3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 596</td>
<td>Practicum in Teaching Art (2).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 598</td>
<td>Special Course: _____ (1-5).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 600</td>
<td>Evaluation and Measurement in Art Education (3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 680</td>
<td>Internship in Teaching Art (5-10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 695</td>
<td>Technical Colloquium: Art Museums and Schools (3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 698</td>
<td>Education of Women in the Arts (2-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 710</td>
<td>Assessment in Art Education (3).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAE 716 Teaching Art: _____ (1-4). Instructional techniques, methodology, materials, and evaluation. Processes for the specific art area named. May be repeated for credit in different media. LEC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VÀE 750 Introduction to Art Museum Education (1-4). This course provides a general overview to the museum education field. Course readings include current ideas and issues on learning, art education, criticism, the museum in education, and museum education practices. LEC

VÀE 774 Art for Exceptional Children (2). A study of the psychology, philosophy, content, and media in art expression and its relationship to mental and creative growth with exceptional children. Prerequisite: SPED 741, which may be taken concurrently. LEC

VÀE 780 Internship in Teaching Art (5-16). A supervised internship experience leading to initial art teacher certification. The student assumes the total professional role as a teacher of art in an approved school setting. LEC

VÀE 790 Applications of Technology in Art Education (1-3). The course is designed to provide students with the skills necessary for using and assessing the impact of microcomputers, video recorders, and other technological developments in arts education. Prerequisite: T&L 601 or equivalent. LEC

VÀE 798 Special Course: _____ (1-5). A special course of study to meet current needs of education professionals; primarily for graduate students. LEC

VÀE 800 Visual Art Education Curriculum Development (1-3). A study of research, resources, and media as they relate to learning goals in a sequential art curriculum for use by teachers. The amount of credit reflects the extent of the curriculum being developed and the amount of work involved in the development process. LEC

VÀE 825 Seminar in: _____ (1-4). LEC

VÀE 830 Seminar in: _____ (1-4). LEC

VÀE 842 Teaching Art Criticism (3). An examination of the four phases of art criticism (description, analysis, interpretation and judgment) will be followed by practice in using these phases in the development of effective art curriculum for all developmental levels. Prerequisite: PRE 702 and PRE 704 or equivalents. LEC

VÀE 850 Aesthetics, the Arts and Education (3). Theoretical introduction to the problems involved in teaching critical appreciation of the arts; examination of materials from aesthetics, art history, and criticism. LEC

VÀE 869 History of Art Education (3). A study of the historical development of art education. Prerequisite: Nine hours of education. LEC

VÀE 875 Research in Art Education (3). This course examines the issues and procedures commonly used to conduct research in art education in preparation for students’ graduate theses or projects. Research methods are adapted and applied to students’ professional needs and interests in the form of a research proposal. LEC

VÀE 890 Preparation for the M.A. Examination (1). An independent reading course in preparation for the M.A. Examination. The grade will be an S or U, as determined by the performance on the examination. Prerequisite: Permission of the instructor. LEC

VÀE 895 Field Experience in: _____ (1-6). Supervised and directed experiences in selected professional settings and cooperating agencies. Prerequisite: Permission of instructor. FLD

VÀE 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

VÀE 898 Master’s Project (1-4). RSH

VÀE 899 Master’s Thesis (1-6). RSH

VÀE 900 Supervision and Evaluation of Visual Arts Programs (3). A study of the administration of school, museum, and community arts education programs. Topics will include curriculum development, personnel supervision, finance, and the quantitative and qualitative evaluation of arts programs. Prerequisite: T&L 703 or equivalent. LEC

VÀE 919 Research in Art Education (3). An examination of research methodology in visual arts education. Emphasis will be on philosophical, historical, qualitative, and quantitative research development. Prerequisite: PRE 715 or equivalent. LEC

VÀE 949 Artistic Learning and Development (3). Research from psychology, sociology, and anthropology will be examined for its implications for the artistic development of the child. Topics include cross-cultural and age comparisons of children’s graphic symbol development, aesthetic judgments, and perceptual skills. Prerequisite: PRE 702 and PRE 704 or equivalents. LEC

VÀE 955 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. LEC

VÀE 956 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 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. RSH

VÀE 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

VÀE 998 Seminar in: _____ (1-4). LEC

VÀE 999 Doctoral Dissertation (1-15). RSH

Applications procedures and program requirements constantly change. Please see our Web site, www.ku.edu/~sfa/mad, for current information.

Chair: Lawrence Mallett
Murphy Hall, 1530 Naismith Dr., Room 450
Lawrence, KS 66045-3102, (785) 864-3536

Application procedures and program requirements constantly change. Please see our Web site, www.ku.edu/~sfa/mad, for current information.

At least a 3.0 grade-point average, overall and in the major area, is required for all course work counted to-

170
ward any graduate degree in music. A semester grade below B in the major area results in the student being placed on probation for one semester; if the grade is not B or higher in the next semester, the student may be 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 director of graduate studies. This usually occurs during the second semester of full-time enrollment. All committees must have at least four members from the graduate music faculty. This committee and major divisional faculty evaluate required recitals and administer the 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. In consultation with the primary faculty member directing the project, the director of graduate studies 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.

*Music Courses*

MUS 586 The Business of Music (2).
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.

*Dance*

Division Director: Jerel Hilding
Robinson Center, 1301 Sunnyside Ave., Room 251
Lawrence, KS 66045-7567, (785) 864-4264
Professor: Hamburg
Associate Professor: Cohan, Hilding
The Division of Dance in the Department of Music and 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: _____ (1).
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 730 Study in Masks and Martial Arts (3). This course studies the use of masks and martial arts as a means of developing the expressiveness of the body. It also provides study in selected Oriental martial arts, such as Tai Chi, Ki Aikido, and Karate to help develop concentration, focus of energy, and physical coordination. 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. LEC.
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 note 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. LEC.
DANC 898 Directed Study (1-3). Directed study in some aspect of aesthetics, dance history, movement analysis, production, or an advanced creative project. Prerequisite: Consent of instructor. IND.

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: Christopher Moore
Murphy Hall, 1530 Naismith Dr., Room 206
Lawrence, KS 66045-3102, (785) 864-4457
Professors: Bushouse, Watson
Associate Professor: Moore
Assistant Professors: Hall, Parks, Stevens

**Organ and Church Music**
Division Director: James Higdon
Lied Center, 1600 Stewart Dr.
Lawrence, KS 66045-7502, (785) 864-2797
Professors: Bauer, Higdon
Assistant Professor: Berghout

**Piano**
Division Director: Richard Reber,
310 Murphy Hall, (785) 864-9643
Professors: Costa, Reber, Winerock
Professors Emeriti: Angeletti, Downs
Associate Professors: Ferrell, Hepp
Assistant Professor: Koenig

**Strings**
Division Director: Edward Laut,
316 Murphy Hall, (785) 864-9659
Professor: Laut
Professor Emeritus: Boyajian
Associate Professor: Sayevich
Assistant Professor: Chun
Voice
Division Director: John Stephens,
306 Murphy Hall, (785) 864-9617
Professors: Castle, Stephens
Professor Emerita: Green
Associate Professors: Crawford, Ferrell, Hinchman
Assistant Professor: Mendez
Woodwinds
Division Director: Vince Gnojek,
202 Murphy Hall, (785) 864-4476
Professors: Boulton, Gnojek, Mallett, Maxey
Professor Emeritus: Scheid
Associate Professor: Hawkins
Assistant Professor: Marco
Master of Music degree programs are offered in accompanying, bassoon, cello, church music, clarinet, double bass, euphonium, flute, French horn, harp, oboe, opera performance, organ, percussion, piano, saxophone, specialist in woodwind instruments, 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 audiotape 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 the opera performance program must take a minimum of one year each in French, German, and Italian before entering graduate school 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 grade of C or demonstrate proficiency by passing a dictated 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 piano performance also must perform a significant role in at least one fully staged production with orchestra. A recital preview is left to the discretion of the faculty members of each division. In divisions with no recital requirement, the option to have a preview is still available to students and faculty members. Divisions must approve recital content well in advance of the final oral examination. The candidate must file a professional-quality CD recording of the final recital with the Department of Music and Dance before the final oral examination is scheduled.

A recommended program of study in accompanying is as follows:
- Advanced accompanying ............................................... 12
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology, music theory, and conducting ... 8-12

ACMP 822 The Accompanist’s Literature ........................................ 3
Electives ......................................................................................... 9-3

A student may emphasize vocal or instrumental accompanying. The vocal accompanying emphasis requires entering graduate students to take dictation 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 recommended program of study for students in bassoon, cello, clarinet, double bass, flute, harp, oboe, saxophone, specialist in brass instruments, viola, and violin is as follows:
- Advanced applied music ....................................................... 12
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology and music theory .................. 12
- Electives .................................................................................. 3

A recommended program of study in brass and percussion is as follows:
- Advanced applied music ....................................................... 12
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology and music theory .................. 12
- W&P 704 Special Studies in Brass Instrumental Pedagogy (1) (brass majors) or W&P 708 Special Studies in Percussion Instrument Pedagogy (1) (percussion majors) ................. 1-2
- Electives ................................................................................... 2

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 recommended program of study in church music (choral conducting emphasis) is as follows:
- Advanced conducting and score reading .................................. 12
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology and music theory .................. 6
- CHUR 804 History of Liturgy ................................................. 3
- CHUR 821, CHUR 822, CHUR 823, CHUR 824 Church Music Colloquia .... 4
- Electives ................................................................................... 2

A recommended program of study in church music (organ emphasis) is as follows:
- Advanced applied music (organ) ............................................. 6
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology and music theory .................. 6
- CHUR 804 History of Liturgy ................................................. 3
- CHUR 806 and CHUR 807 Service Playing I and II .................... 4
- *COND 711 and COND 712 Choral Conducting I and II .............. 4
- CHUR 821, CHUR 822, CHUR 823, CHUR 824 Church Music Colloquia .... 4
- *COND 811 Advanced Choral Conducting may substitute for this requirement with the permission of the organ and conducting faculties.

Church music majors must be enrolled in a choral ensemble for two semesters.

A recommended program of study in opera performance is as follows:
- Advanced applied music (voice) ............................................. 9
- Vocal coaching ....................................................................... 3
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced course in music theory .......................................... 3
- Opera workshop and opera production ................................... 9
- Electives ................................................................................... 3

The written diagnostic examinations in musicology and music theory are not required in the opera performance program.

A recommended program of study in organ is as follows:
- Advanced applied music (organ) ............................................. 9
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology and music theory .................. 9
- ORGN 802 and ORGN 803 History of Organ Literature and Organ Design I and II ................................................................. 6
- ORGN 708 Organ Pedagogy ..................................................... 3

M.M. organ majors must be enrolled in a ORGN 702 Master Class in Organ for at least two semesters.

A recommended program of study in piano performance and pedagogy is as follows:
- Advanced applied music (piano) ............................................. 12
- MUSC 801 Music Bibliography and Research ........................... 3
- Advanced courses in musicology and music theory .................. 9
- Advanced piano pedagogy/piano literature ............................... 2-3
- Electives ................................................................................... 4
A recommended program of study in voice is as follows:

- Advanced applied music (voice) ......................................................... 12
- MUSC 801 Music Bibliography and Research .................................... 3
- Electives in musicology and music theory ........................................ 9-12
- Electives ........................................................................................ 2-4

A recommended program of study for the woodwind specialist is as follows:

- Major instrument .............................................................................. 8
- Secondary instruments (4 instruments) ................................................ 4
- MUSC 801 Music Bibliography and Research .................................... 3
- Electives in musicology and music theory ........................................ 12
- W&M 702 Special Studies in Woodwind Instrument Pedagogy ............ 3

### 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.

- **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.

- **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

- **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

- **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

### Church Music

- **Church Music Courses**

  - 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 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 921 Church Music Colloquium I: Anthem Literature (1). A survey of significant anthem literature. Prerequisite: Permission of instructor, LEC
  - CHUR 922 Church Music Colloquium II: Handbell (1). Handbell history, literature, performance, and rehearsal techniques. Prerequisite: Permission of instructor, LEC
  - CHUR 923 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 924 Church Music Colloquium IV: Hymnody (1). A study of the historical development of hymnody. Prerequisite: Permission of instructor, LEC
  - CHUR 925 Seminar in Church Music (3). History of church music, the church and the arts, church history, and hymnology through the end of the sixteenth century. LEC
  - CHUR 926 Improvisation (2). Applied study in improvisation at the organ. Prerequisite: Permission of instructor, LEC

### Keyboard

- **Accompanying Courses**

  - ACM 527 Accompaniment (1-4).
  - ACM 529 Performance Class in Accompaniment (1).
  - ACM 727 Accompaniment (1-4). Individual instruction in vocal and instrumental accompanying. Prerequisite: Consent of instructor. IND
  - ACM 811 Advanced Accompaniment (1-6). For graduate students majoring in accompanying. May be repeated for credit. Summer session limit one to three hours. IND
  - ACM 822 The Accompanist's Literature (3). A course in which major vocal and instrumental works are studied with vocal or instrumental participants. LEC
Music & Dance—M.M. Areas in Performance

- Carillon Courses
  - CARI 621 Carillon (1-4).
  - CARI 711 Carillon (1-4). IND

- Harpsichord Courses
  - HPCO 621 Harpsichord (1-4).
  - HPCO 711 Harpsichord (1-4). Summer session limit one to two credits. IND

- Organ Courses
  - ORGN 502 Master Class in Organ (1-3).
  - ORGN 524 Laboratory in Organ Construction (3).
  - ORGN 603 Institute for Organ and Church Music (1-2).
  - ORGN 608 Organ Pedagogy (2).
  - ORGN 622 Organ (1-3).
  - ORGN 702 Master Class in Organ (1-3). A class in the performance of advanced organ repertoire. For organ majors only or by consent of instructor. May be repeated for credit. LAB
  - ORGN 708 Organ Pedagogy (3). A survey of the philosophy, methods, and materials of organ pedagogy. Prerequisite: Permission of instructor. LEC
  - ORGN 711 Organ (1-4). For graduate students not majoring in organ. May be repeated for credit. Summer session limit one to three hours. IND
  - ORGN 802 History of Organ Literature and Organ Design I (3). A survey of organ literature and organ design from the Middle Ages through the Baroque period. Prerequisite: Permission of instructor. LEC
  - ORGN 803 History of Organ Literature and Organ Design II (3). A detailed study of organ repertoire, performance practice, the history of organ building as it affects the performance of a particular body of literature, liturgical or other extra-musical contexts, and other influences on musical style. May be repeated for credit when topics vary. LEC
  - ORGN 811 Organ (1-6). For graduate students majoring in organ. May be repeated for credit. Summer session limit one to three hours. IND
  - ORGN 921 Seminar in Performance (0-3). A detailed study of organ repertoire, performance practice, and the history of organ building as it affects the performance of a particular body of literature, liturgical or other extra-musical contexts, and other influences on musical style. May be repeated for credit when topics vary. LEC

- Piano Courses
  - PIAN 522 Piano Technology I (3).
  - PIAN 523 Piano Technology II (3).
  - PIAN 540 Piano Pedagogy I (3).
  - PIAN 546 Piano Pedagogy II (3).
  - PIAN 622 Piano (1-3).
  - PIAN 624 Piano Workshop (1-3).
  - PIAN 640 Piano Pedagogy III (2).
  - PIAN 643 Piano Repertoire I (3).
  - PIAN 644 Piano Repertoire II (3).
  - PIAN 646 Piano Pedagogy IV (1-2).
  - PIAN 711 Piano (1-4). For graduate students not majoring in piano. May be repeated for credit. Summer session limit one to three hours. IND
  - PIAN 720 Piano Performance Class (1). Performances, lectures, and discussion of all aspects of performance. May be repeated for credit. Prerequisite: Consent of instructor. IND
  - PIAN 802 Master Class (1). A class in the performance of advanced piano repertoire. Enrollment by permission of the department. IND

- Strings Courses
  - STRG 921 Seminar in Performance and Pedagogy (0-3). A detailed study of repertoire, performance practice, pedagogical, and stylistic problems relating to keyboard music. May be repeated for credit when topics vary. LEC
  - STRG 921 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
  - STRG 965 Doctoral Recitals (1-3). Maximum credit, seven hours. RSH
  - 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
  - STRG 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

- The Lied Center Series includes
  - the Concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and the Lied Family Series, bringing outstanding performers to KU each year.

Information about performances is available online at www.ku.edu/~sfa/mad or www.ku.edu/~lied.

The Lied Center houses a 2,020-seat auditorium with state-of-the-art spatial qualities and technical production capabilities.
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

STRG 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

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 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). May be repeated for credit to a maximum of seven hours. RSH

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. RSH

VIOLIN 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. RSH

WIND AND PERCUSSION

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). 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

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. RSH
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. RSH

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). RSH
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. RSH
Music & Dance—M.M. Areas in Performance

- **Oboe Courses**
  OBOE 622 Oboe (1-4).
  OBOE 711 Oboe (1-4). For graduate students not majoring in oboe. May be repeated for credit. Summer session limit one to three hours. IND
  OBOE 731 Baroque Oboe (1-4). IND
  OBOE 811 Oboe (1-6). For graduate students majoring in oboe. May be repeated for credit. IND
  OBOE 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the baroque oboe during the seventeenth and eighteenth centuries. LEC
  OBOE 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC
  OBOE 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
  OBOE 965 Doctoral Recitals (1-3). Maximum seven hours credit. RSH
  OBOE 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. Summer session limit one to three credits. Prerequisite: Consent of instructor. RSH
  OBOE 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

- **Percussion Courses**
  PCUS 622 Percussion (1-4).
  PCUS 711 Percussion (1-4). 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 study 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). RSH
  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. RSH

- **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 invention 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. RSH
  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 the candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. RSH

- **Wind and Percussion Courses**
  W&P 630 Orchestral Repertoire (1).
  W&P 655 Independent Study (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 music repertoire, mouthpieces and reeds, discography, techniques of tone 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 laboratory research. Summer session only. Prerequisite: Teaching experience or undergraduate instruction in the instruments, or permission of the instructor. LEC
  W&P 708 Special Studies in Percussion Instrument Pedagogy (1). Physiological factors of percussion playing, teaching materials and techniques, practice methods, solo and chamber music repertoire, mallets and sticks, discography, techniques of tone production, articulation, muscular development and control, and intonation both actual and implied. LEC

- **Voice**
  - **Voice Courses**
    VOIC 500 Directed Study (1-3).
    VOIC 520 Vocal Coaching (1).
    VOIC 622 Voice (1-4).
    VOIC 670 Advanced Lyric Diction for Singers: _____ (1).
    VOIC 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
    VOIC 705 Advanced Vocal Literature I (3). An investigation of the development of French melodie. The course will include directed readings, writing, and performance research. LEC
    VOIC 706 Advanced Vocal Literature II (3). An investigation of the development of German lieder. The course will include directed readings, writing, and performance. LEC
    VOIC 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
    VOIC 711 Voice (1-4). For graduate students not majoring in voice. May be repeated for credit. Summer session limit one to three hours. IND
    VOIC 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
    VOIC 740 Vocal Performance (1). A class in the performance of vocal repertoire. IND
    VOIC 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, unlabored English pronunciation will be studied. The International Phonetic Alphabet will be employed. IND
    VOIC 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. Discussions of repertoire choices, vocal health, teaching styles, career development and other topics pertaining to the training of singers will be included. Added emphasis will be placed on historical and contemporary pedagogues through original research. LEC
    VOIC 811 Voice (1-6). For graduate students majoring in voice. May be repeated for credit. Summer session limit one to three hours. IND

- **Crafton-Preyer Theatre has complete facilities for presenting plays, operas, musical theatre shows, and concerts.**

The Thomas Gorton Music and Dance Library houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials, and has the leading music collection in the Great Plains.
M.M. in Music Theory or Composition

Division Director: James Barnes
Murphy Hall, 1530 Naismith Dr., Room 222
Lawrence, KS 66045-3102, (785) 864-4514

Professors: Barnes, Hoag
Professors Emeriti: Mattila, Pozdro, Shumway
Associate Professors: Holmberg, McGee
Assistant Professors: Haaseim, Murphy

Admission
Applicants are expected to have educational back-grounds 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 acceptance into the program. In addition to the required course work, students are encouraged to continue study of performance and participate in ensembles on the major instrument.

M.M. Degree Requirements

Recommended 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/MUSC 778 History of Music Theory* ..................... 3
- Thesis, .............................................................. 6
*When offered; otherwise, 3 hours of electives may be substituted.

Composition
- Advanced composition .................................................. 6
- Advanced musicology and music theory ................................. 12
- MUSC 801 Music Bibliography and Research ......................... 3
- Thesis, .............................................................. 6

Recital

M.M. in Musicology

Division Director: Paul Laird
Murphy Hall, 1530 Naismith Dr., Room 334
Lawrence, KS 66045-3102, (785) 864-9716

Professors: Barnes, W. Clark, Maxey
Professors Emeriti: J.B. Clark, Politoske
Associate Professor: Laird
Assistant Professors: Henry, Schwartz

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Admission
Applicants are expected to have educational back-
grounds 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 at the piano is encour-
aged. 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 899 Thesis ................................................................. 6
Electives in music performance ........................................................................................ 4

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 656 Collegium Musicum, Instrumental (0-1).
MUSC 774 Readings in Jazz and American Popular Music (1-3). Investigation of a subject by means of directed study of primary re-
sources. Prerequisite: Permission of instructor. IND
MUSC 752 Music of the Middle Ages (3). Prerequisite: MUSC (MHST) 432. LEC
MUSC 753 Music of the Renaissance (3). Prerequisite: MUSC (MHST) 432. LEC
MUSC 754 Music of the Baroque Era (3). Prerequisite: MUSC (MHST) 472. LEC
MUSC 755 Music of the Classical Era (3). Prerequisite: MUSC (MHST) 472. LEC
MUSC 756 Music of the Romantic Era (3). Prerequisite: MUSC (MHST) 392. LEC
MUSC 757 Music of the Twentieth Century (3). Prerequisite: MUSC (MHST) 392. LEC
MUSC 758 History of Musical Instruments (3). Prerequisite: MUSC (MHST) 432 or MUSC (MHST) 472 or permission of instructor. LEC
MUSC 759 Music in America (3). A survey of historical developments from the Pilgrims to the present. (Same as AMS 737.) Prerequisite: One course in the field of music history or permission of the in-
structor. LEC
MUSC 760 History of Opera (3). Prerequisite: MUSC (MHST) 392 and MUSC (MHST) 472. LEC
MUSC 761 History of the Mass (3). Prerequisite: MUSC (MHST) 432 and MUSC (MHST) 472, or permission of instructor. LEC
MUSC 763 History of Chamber Music (3). Prerequisite: MUSC (MHST) 392 and MUSC (MHST) 432, or permission of instructor. LEC
MUSC 766 History of the Concerto (3). Prerequisite: MUSC (MHST) 392 and MUSC (MHST) 472, or permission of instructor. LEC
MUSC 767 History of the Symphony (3). Prerequisite: MUSC (MHST) 392 and MUSC (MHST) 472, or permission of instructor. LEC
MUSC 768 History of Wind Band Music (3). A chronological survey of the development of the wind band/ensemble and its music, using 

standard musical works from each historical period. Prerequisite: MUSC (MHST) 440, MUSC (MHST) 480, or permission of instructor. LEC
MUSC 775 History of Keyboard Music (3). Prerequisite: MUSC (MHST) 392, MUSC (MHST) 432, and MUSC (MHST) 472. LEC
MUSC 777 History of Solo Vocal Music (3). Prerequisite: MUSC (MHST) 392, MUSC (MHST) 432, and MUSC (MHST) 472. LEC
MUSC 778 History of Music Theory (3). A historical survey of music theory, both practical and speculative, from the ancient Greeks to the late twentieth century. (Same as MTHC 778.) LEC
MUSC 794 Readings in Musicology (1-3). Investigation of a subject by means of directed reading of primary literary sources. Prerequisite: A grade average of "B" in two music theory courses numbered 500 or 

above and consent of instructor. IND

MUSC 801 Music Bibliography and Research (3). Bibliography, re-
search methods, and scholarly writing in music for entering graduate
students. Prerequisite: Permission of instructor. LEC
MUSC 802 Advanced Music Bibliography and Research (3). Ad-
vanced bibliography and writing of research papers. Prerequisite:
MUSC (MHST) 801. LEC
MUSC 899 Thesis (1-6). RSH
MUSC 902 Seminar in Musicology (3). A research course designed
primarily for doctoral students in musicology. Prerequisite: MUSC-
(MHST) 801, or its equivalent. LEC
MUSC 903 Seminar in Performance Practices (3). Primary and sec-
dary sources in performance practices dealing mainly with the sev-
enteenth through nineteenth centuries, with implications applicable to
student’s performance medium. LEC
MUSC 940 Seminar on Selected Topics in Musicology: _____ (3).
Each semester a topic (to be inserted in the blank) will be the basis for
discussion, reports, and a research paper. May be repeated for credit
provided no course duplication takes place. LEC
MUSC 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholar-
ly 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
MUSC 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
MUSC 999 Dissertation (1-12). RSH

M.M. in Conducting
Band Conducting
Division Director: John P. Lynch
Murphy Hall, 1530 Naismith Dr., Room 124
Lawrence, KS 66045-3102, (785) 864-3367

Choral Conducting
Division Director: John Paul Johnson,
332 Murphy Hall, (785) 864-9699

Orchestral Conducting
Division Director: Nicholas Uljanov,
126 Murphy Hall, (785) 864-4499

Professors: Bauer, Foster
Professors Emeriti: Priestman, Ralston
Associate Professors: Gailey, Johnson, Sidham, Uljanov
Assistant Professors: Daugherty, Hankewich, Lynch

Admission
Applicants are expected to have educational back-
grounds equivalent to the B.M. or B.M.E. degree (in-
cluding a course in form and analysis) from KU. They
should have experience in conducting that spans a pe-
riod of at least one year. Such experience may include
work in public school, college, or with other amateur
or professional ensembles. Applicants normally are ex-
pected to have a high level of performing ability on an
instrument or in voice. Applicants must complete audi-
tion-interviews successfully before the divisional fac-
ulty and should provide a résumé of their conducting
experience, including programs of public appearances.

M.M. Degree Requirements
The degree candidate must present a final project con-
sisting of a public choral or instrumental program. A
recital preview is left to the discretion of the faculty
members of each division. In divisions with no preview
requirement, the option 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. The candidate must file a
professional-quality CD recording of the final recital
with the Department of Music and Dance before the final examination is scheduled.

A recommended program of study (minimum of 30 hours) is as follows:

- **Band Courses**
  - BAND 501 Workshop in: _____ (0.5-3).
  - BAND 559 Scoring for Concert Band (2).
  - BAND 600 University Symphonic Band (0-1).
  - BAND 602 Concert Wind Ensemble (0-1).
  - BAND 630 Band Repertoire (2).
  - BAND 701 Workshop in _____ (0.5-3). May be repeated for credit. LEC
  - BAND 803 Interpretation of Band Music (1). A study of the essential factors necessary for the understanding and subsequent interpretation of various compositions of advanced band music. In addition to the regular course work, students must qualify for the band, attend at least six hours of rehearsal per week and play in all concerts. May be repeated for credit. Prerequisite: Consent of instructor. LAB

- **Choral Music Courses**
  - CHOR 620 Dread Consort (0-1).
  - CHOR 628 Summer Chorus (0-1).
  - CHOR 630 Choral Repertoire (2).
  - 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 830 Sacred Choral Repertoire (2). A study of anthems for liturgical 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 962 D.M.A. Public Rehearsal(s) (1). A one hour public rehearsal (or series of shorter rehearsals) to incorporate planned physical and vocal warm-up exercises, training in intonation and vocal control, and a concentrated practice session on choral music in various states of preparation. LAB

- **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: MEMT 246, MEMT 330, and/or consent of instructor. RSH
  - COND 712 Choral Conducting II (2). Spring semester. A continuation of COND 711. Interpretive analysis of stylistic characteristics of the Romantic and contemporary periods. Prerequisite: MEMT 246, MEMT 330, and/or consent of instructor. RSH
  - COND 745 Instrumental Conducting (2). A study of conducting techniques and problems in rehearsal and performance. Score analysis and repertoire development. May be repeated for credit. Prerequisite: Consent of instructor. RSH
  - COND 791 Score Reading (2). Development of skills in the reading of all clefs and the most common transpositions. Simultaneous reading of multiple lines and their practical rendition at the piano. May be repeated for credit. RSH
  - COND 811 Advanced Choral Conducting (1-6). A study of conducting techniques as they pertain to developing an expressive and precise choral ensemble. Participating in rehearsals under the supervision of the instructor. May involve conducting in public performance. May be repeated for credit. Summer session limited to one to three hours. Prerequisite: Four hours of conducting and/or consent of instructor. IND

- **Jazz Courses**
  - JAZZ 608 Jazz Ensemble (0-1).
  - JAZZ 612 Vocal Jazz Ensemble (0-1).
  - JAZZ 624 Advanced Jazz Improvisation (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 (0-1).

---

**M.M.E. in Music Education and Music Therapy**

Division Director: George L. Duelerksen
Murphy Hall, 1530 Naismith Dr., Room 448
Lawrence, KS 66045-3102, (785) 864-4784
www.ku.edu/~memt

Professors: Clair, Duelerksen, Hadden, Johnson

Professors Emeriti: Heller, Radocy, Scheid

Associate Professor: Daugherty

Assistant Professor: Colwell

The division's graduate program includes advanced professional and scholarly study for music educators and music therapists, certification programs for those with baccalaureate degrees in other fields who plan to enter the music education and music therapy professions (these initial 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.
Music & Dance—M.M.E. Music Education & Music Therapy

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. Three letters of recommendation.

Submit your application to the Graduate School online at www.graduateschool.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 16 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 admission.

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 will not be confined to that topic.

Music Education and Music Therapy Courses

MEMT 500 Student Teaching in: (1-6).
MEMT 596 Clinical Internship (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). Skills and knowledge needed to facilitate appropriate and productive integration of children and youth with disabilities into music classroom settings. Prerequisite: MEMT 500 and SPED 431. LEC
MEMT 753 Psychology and Acoustics of Music (3). Psychological and acoustical bases of music and human musical behavior. Study of musical sound production, transmission, reception, and reproduction. Laboratory component and research project required. LEC
MEMT 763 The Influence of Music on Behavior I (3). A study of the various effects of music. Place of functional music in music education. Investigation of effective media and musical patterns. The relation of music to health. Prerequisite: Admission to the professional sequence in music education or music therapy or with permission from the MEMT division. LEC
MEMT 764 Music in Therapy (3). Issues examined include music therapy concepts in the development of program applications, professional marketing, and job proposals. These applications are based on theoretical constructs covering the psychological, physiological, and social responses of persons to music. In addition, this course includes current trends in the field along with regulatory guidelines concerning practice design, implementation, and evaluation, ethics, and standards of clinical practice. Prerequisite: Admission to the professional sequence in music education or music therapy or with permission from the MEMT division. LEC
MEMT 772 Music Education and Music Therapy Research Project (1-3). Clinical, laboratory, field, or historical research in music education or music therapy. Prerequisite: MEMT 366 or equivalent, permission of instructor. IND
MEMT 780 Internship in Teaching Music: (1-15). A supervised internship experience leading to initial music teacher certification. The student assumes the total professional role as a teacher of music in an approved school setting. FLD
MEMT 791 Music Education/Music Therapy Techniques: (1-3). Specific methodologies, strategies, approaches, and materials for music education/music therapy for specific populations, musical media, instructional settings, or clinical environments. LEC
MEMT 798 Special Course: (1-5). A special course of study to meet current needs of education professionals—primarily for graduate students. LEC
MEMT 812 Research in Music Education and Music Therapy (3). Study of research in music education and music therapy. Required of all candidates for graduate degrees. Enrollment must precede or be concurrent with enrollment in thesis. LEC
MEMT 813 History and Philosophy of Music Education (3). A study of music education with reference to its historical development and to educational psychology. Consideration of recent trends and the place of music in the school curriculum. Criteria for the evaluation of activities, courses, materials, and methods in a well-balanced program of music. LEC
MEMT 814 Sociology of Music (3). A study of societal influence on musical thought and practice, both in historical perspective and in comparative study of 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 systems for music education, music therapy, and other fields. LEC
MEMT 816 Current Trends in Music Education (3). Study of current trends in music goals, objectives, materials, equipment, facilities, procedures, and evaluation. Emphasis on understanding personalities and
events which have effected changes in the field within the past five years, describing the status at present, and looking at possibilities for future development. LEC

MEMT 817 Methodologies in Music Education (3). A survey of music methodologies (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 ameliorative aspects of music. LEC

MEMT 823 Seminar in: _____ (1-3). 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. Classical 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 863 The Influence of Music on Behavior II (3). 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 890 Practicum in Music Therapy (1-16). Advanced music therapy practice including clinical work with a population of the student’s choice which incorporates music therapy program design, implementation, and evaluation. The student will work in consultation with qualified Music Therapy staff. FLD

MEMT 891 Advanced Clinical Techniques (3). The student will articulate, test and refine music therapy clinical practice protocol(s) with a clientele(s) of choice. Students will work in consultation with qualified Music Therapy staff. FLD

MEMT 892 Supervision in Music Therapy I (3). Study and application of theoretical models and supervisory roles applicable to music therapy clinical supervision. Students will review developmental levels for supervisors and practicum students. Supervision of music therapy clinical practicum students will be required. LEC

MEMT 893 Supervision in Music Therapy II (3). A model of practicum supervision will be applied in music therapy clinical practicum supervision. Video and/or tape recordings of supervision conferences with practicum students will be reviewed in consultation with qualified music therapy staff. LEC

MEMT 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

MEMT 899 Master’s Thesis (1-6). RSH

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 and community. LEC

MEMT 923 Seminar in: _____ (1-3). LEC

MEMT 953 Advanced Acoustical and Psychological Aspects of Musical Behavior (3). Study and experimental investigation 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 ability. Each student will be expected to complete an experiment or quasi-experiment related to human musical behavior. (Same as PSYC 853.) Prerequisite: MEMT 453 or equivalent, 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 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

MEMT 996 Practicum in College Teaching (1-3). College teaching experience, guided by a major professor in the department. Open only to doctoral aspirants or candidates. FLD

MEMT 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. IND

MEMT 998 Seminar in: _____ (1-4). LEC

MEMT 999 Doctoral Dissertation (1-15). RSH

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, the 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 the specific fields of church music (organ or choral conducting emphasis), composition, conducting (band, choral, or orchestral), and most 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 resumes of their training and experience in teaching and performing. For general information on academic requirements, residence, tenure, and enrollment, see General Information in this catalog. Further admission requirements for the fields are indicated 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. 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 videotape. The graduate faculty in the ensemble divisions review this tape.

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. The graduate faculty in the major division hear this tape.

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 director of graduate studies in music:

1. Reading proficiency in a foreign language(s).
2. Proficiency in computer techniques by completing one of two tracks:

   Track A
   2. Complete at least one graduate seminar in computer applications in music.
   3. 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
   1. Complete EECS 268 or equivalent.
   2. 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. A faculty advisory committee is selected by each graduate student, in consultation with the major adviser, subject to the consent of the faculty members involved, and approved by the director of graduate studies in music. This usually occurs during the second semester of full-time enrollment. All committees must have at least four members from the graduate faculty in the Department of Music and Dance. 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 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 recitals must contain 50 to 60 minutes of programmed music and be performed with an official university ensemble approved by the committee on graduate studies in music. A student who wishes to use an ensemble other than the groups already approved, to organize his or her own ensemble for a maximum of one recital, or to present a program of less than the required length, must request approval from the committee on graduate studies in music no later than the end of the semester before the beginning of the rehearsals.

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.

Doctoral Theory Comprehensive Examinations. All students must complete two music theory projects. One must be post-tonal, and the other either tonal or pre-tonal, usually centered on literature from the student's primary area of study. Students may begin the projects any time after completing the first theory course. Once the second project has been successfully completed, the music theory comprehensive examination requirement is satisfied.

Musicology and Oral Comprehensive Examinations. When the D.M.A. aspirant has fulfilled the foreign language and research skills requirement, completed most course work, and maintained the quality of work at a level satisfactory to the major division and the Graduate School, he or she may request the Graduate Division to schedule the comprehensive musicology examination. This is a written test in musicology (some major divisions also may require a written examination in the major area) and an oral examination administered by the 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 prospect-
## Music & Dance—Doctor of Musical Arts

### Areas in Performance

#### Typical program in bassoon, flute, oboe, and saxophone:

- **Master's degree in performance**: 30
- **Applied music** (Four semesters, 5 hours per semester) 20
- **Seminars in bassoon, flute, oboe, or saxophone**: 6
- **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) 7
- **W&P 742 Special Studies in Woodwind Instrument Pedagogy**: 3
- **MUSC 801 Music Bibliography and Research** 3
- **Advanced courses in musicology and music theory**: 12
- **D.M.A. document or lecture-recital** 3

#### Typical program in church music (choral conducting emphasis):

- **Master's degree in performance**: 30
- **Applied music**: 19
- **CHUR 921, CHUR 922, CHUR 923 Seminars in Church Music**: 9
- **CHUR 921, CHUR 922, CHUR 923 Seminars in Church Music**: 9
- **CHUR 801 History of Liturgy**: 3
- **MUSC 801 Music Bibliography and Research**: 3
- **Recitals** (two organ recitals, one choral recital) 0
- **Secondary applied area (organ or voice)** 6
- **D.M.A. document or lecture-recital**: 3
- **CHUR 821, CHUR 822, CHUR 823, CHUR 824 Church Music Colloquia**: 7
- **Electives**: 12

#### Typical program in church music (organ emphasis):

- **Master's degree in performance**: 30
- **Applied music**: 19
- **CHUR 921, CHUR 922, CHUR 923 Seminars in Church Music**: 9
- **CHUR 921, CHUR 922, CHUR 923 Seminars in Church Music**: 9
- **CHUR 921, CHUR 922, CHUR 923 Seminars in Church Music**: 9
- **CHUR 801 History of Liturgy**: 3
- **MUSC 801 Music Bibliography and Research**: 3
- **Recitals** (two organ recitals, one choral recital) 0
- **Secondary applied area (organ conducting)** 6
- **D.M.A. document or lecture-recital**: 3
- **CHUR 821, CHUR 822, CHUR 823, CHUR 824 Church Music Colloquia**: 7
- **Electives**: 12

### Electives

- **Three to 6 hours of this total must be chosen from the following**: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital 7
- **W&P 704 (1), W&P 702 (2), BAND 803 (1), COND 745 (2)**

#### Typical program in piano performance, literature, and pedagogy:

- **Master's degree in performance**: 30
- **Applied music**: 20
- **Seminars in piano**: 9

---

### Composition

#### Typical program:

- **Master's degree in composition**: 30
- **Composition**: 16
- **MUSC 801 Music Bibliography and Research**: 3
- **Advanced courses in musicology and music theory**: 9
- **MTHC 965 Doctoral Composition Recital** 2
- **Dissertation** (A complete program of original works in various media, in which the composer participates as performer or conductor) 2
- **Electives**: 16

#### Composition majors must present a public program of original compositions, approximately 45 minutes in duration, before being admitted to the comprehensive examination.

### Conducting

#### Typical program in band conducting:

- **Master's degree in conducting or equivalent**: 30
- **Advanced conducting**: 12-14
- **Score reading**: 4
- **Seminars in repertoire**: 9
- **MUSC 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**: 10-12

#### Typical program in choral conducting:

- **Master's degree in conducting or equivalent**: 30
- **Advanced choral and instrumental conducting and score reading**: 21
- **Seminars in repertoire**: 9
- **CHOR 962 D.M.A. Public Rehearsal(s)** 1
- **Recitals** (one public recital and one public lecture-recital) 2
- **CHOR 820 Orchestral Bowling Techniques for Choral Conductors**: 1
- **MUSC 801 Music Bibliography and Research**: 3
- **Advanced courses in musicology and music theory**: 9
- **D.M.A. document or lecture-recital**: 3
- **Electives**: 10-12

#### Typical program in orchestral conducting:

- **Master's degree in conducting or equivalent**: 30
- **Advanced conducting, score reading, and analysis**: 21
- **Seminars in repertoire**: 9
- **MUSC 801 Music Bibliography and Research**: 3
- **Advanced courses in musicology and music theory**: 9
- **Recitals**: 3
- **D.M.A. document or lecture-recital**: 3
- **Electives**: 10-12

Conducting majors must be enrolled in an ensemble during each semester of residence.
Music & Dance—Doctor of Musical Arts; Doctor of Philosophy in Music

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 the University of Kansas 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, 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.

Course of Study. Specific course work for each student is arranged individually in consultation with the student’s advisor. 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 650 to 799, 802, 902, or 940 and at least three more 3-credit-hour courses in music theory numbered from 655 to 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 chosen 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 the University of Kansas.

Doctoral Theory Comprehensive Examinations. All students must complete two projects. One must be post-tonal, and the other either tonal or pre-tonal, usually centered on literature from the student's primary area of study. Students may begin the projects any time after completing the first theory course.

Musicology and Oral Comprehensive Examinations. Comprehensive written and oral examinations are given when the student has satisfactorily completed most of the course work and has fulfilled the language requirements. The written examination tests the student's general knowledge of musicology and her or his ability to discuss, in depth, specific aspects, issues, and developments in music. Musicology and music theory students must make an additional examination in the major field. Upon successful completion of the written examination and the theory comprehensive examination, an oral examination of about two hours is administered by the student's graduate advisory committee and a representative of the Graduate School. 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 may be 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 www.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 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 music therapist.
5. Passing score on the music education and music therapy division aspirancy examination.

Research Skills

Doctoral students in music education and music therapy must demonstrate research skills by completing a series of three research projects suitable for publication. To determine suitability, the student's doctoral committee reviews each completed project and rules whether the project is of sufficient quality for publication in a national, refereed research journal in music education or music therapy.

Projects are developed and completed in consultation with appropriate doctoral faculty members. Projects must be divided between historical and empirical research. Historical research categories include biographical, geographical, institutional, and other research. Empirical research categories include descriptive, experimental, and qualitative research.

Research competency at an advanced level must be demonstrated in either the historical or the empirical area. The advanced competency in historical research requires proficiency in one foreign language or reading ability in two foreign languages. The advanced competency in empirical research includes knowledge of statistics. Normally, advanced research develops the focus for the doctoral dissertation.

The three research projects may be a portion of the work in MEMT graduate classes, or they may be completed outside classes or as a combination of work completed within and outside classes. The completion of each research project 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 Do-all form after completion of the project.

Preliminary and Comprehensive Examinations

The student must pass a series of examinations, culminating with the comprehensive oral examination as specified by the Graduate School.

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.

Detailed information about admission and the division can be found at www.ku.edu/~memt.

Graduate Programs in Related Fields

College of Liberal Arts and Sciences. For information on these programs, please consult the College of Liberal Arts and Sciences chapter of this catalog.

Department of History of Art:
- Master of Arts
- Doctor of Philosophy

Department of Theatre and Film:
- Master of Arts
- Master of Fine Arts in Scenography
- Doctor of Philosophy
William Allen White School of Journalism and Mass Communications

Marketing Communications
Course of Study—Edwards Campus .......... 190
Admission Requirements ........................................... 190
Course Requirements ............................................ 190
Required Courses .................................................. 191
Elective Courses ................................................... 191

Journalism & Mass Communications
Courses ............................................................. 191

James K. Gentry, Dean
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7575, (785) 864-4755

Stauffer-Flint Hall is the home of the William Allen White School of Journalism and Mass Communications.
William Allen White School of Journalism and Mass Communications

The William Allen White School of Journalism and Mass Communications offers a professional graduate program that leads to a terminal Master of Science degree in journalism. The program emphasizes professional preparation and the ability to think critically and perform in converged media. Major areas of study are News/Information, Strategic Communications, and Marketing Communications.

News/Information includes newspapers, online, broadcasting, and magazines. Strategic Communications includes advertising, direct marketing, personal selling, public relations, and sales promotion. These major areas involve work with new media and a variety of different forms of publications and dissemination. They are offered on the Lawrence campus.

The Marketing Communications course of study emphasizes the integration of marketing communications specialties. The curriculum is an advanced series of courses requiring 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.

Students may enter the program in fall semester only. The application deadline is the preceding March 15. Applications can be considered only after these items have been submitted:
1. Completed application form.
2. Two official transcripts of all college-level courses.
3. Scores on the Graduate Record Examination or GRE Writing Assessment.
4. Three letters of reference from persons familiar with the applicant’s abilities.
5. Written, one-page statement of the applicant’s academic and professional objectives.
6. Nonrefundable application fee:
   - Domestic students applying online ............................................... $45
   - Domestic students applying on paper ........................................... $55
   - International students applying online ......................................... $55
   - International students applying on paper ..................................... $60
7. International students whose native language is not English also must submit Test of English as a Foreign Language examination scores.
8. International students must submit proof that they have the financial resources to cover annual expenses.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

Graduate Degree Requirements
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 written qualifying 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 9 hours of core courses, 15 hours of professional courses, and 12 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 a school accredited by the Accrediting Council on Education in Journalism.
and Mass Communications. A student who does not meet the requirement must complete three undergraduate courses that do not count toward the 36-hour graduate credit requirement:

- JOUR 301 Research and Writing (3) or an alternative approved by the graduate director
- JOUR 415 Multimedia Reporting (3) or JOUR 435 Message Development (3)
- JOUR 419 Multimedia Editing (3)

Core Course Requirements. The core graduate courses help students develop strong research and critical-thinking skills. Three courses are required:

- JOUR 799 Survey of Mass Media and Popular Culture (3)
- JOUR 801 Research I: Theory (3)
- JOUR 802 Research II: Methods (3)

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 must take JOUR 750 Multimedia Management (3 credit hours). A student takes the remainder of the professional courses from among courses numbered JOUR 500 to JOUR 698, excluding JOUR 618 First Amendment and Society, and including at least one of the following:

- JOUR 676 Strategic Campaigns (4)
- JOUR 692 TV News I: Campus Media (3)
- JOUR 693 TV News II: Campus Media (3)
- JOUR 694 Online Writing, Design, and Production: Campus Media (3)
- JOUR 695 Newspaper Reporting: Campus Media (3)
- JOUR 696 Newspaper and Online Editing: Campus Media (3)
- JOUR 697 Magazine Editing: Campus Media (3)
- JOUR 698 Media Sales: Campus Media (3)
- JOUR 750 Multimedia Management (3)

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 12 credit hours of advanced course work:

- JOUR 840 Seminar in… (3)
- JOUR 841 Seminar in First Amendment and Society (3) or completion of an equivalent course as part of a baccalaureate degree in journalism
- JOUR 897 Project/Thesis Development (3)
- JOUR 898 Master’s Project (3) or JOUR 899 Master’s Thesis (3)

Qualifying Examination. Each student must pass a written qualifying examination in the semester before enrolling in JOUR 898 Master’s Project or JOUR 899 Master’s Thesis. This examination demonstrates the student’s readiness to begin work on the project or thesis. It is evaluated by an examination committee of three graduate faculty members, who also will 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. 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 898 or 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.

Marketing Communications Course of Study—Edwards Campus

The University of Kansas Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
(913) 897-8416, http://edwardscampus.ku.edu/IMC

The school offers a course of study in strategic marketing communications leading to a Master of Science degree in journalism. The curriculum is an advanced series of courses requiring at least two years of professional experience in marketing communications or other media-related fields. Marketing communications integrates professional specialties in advertising, public relations, business communications, sales promotion, and selling. The curriculum emphasizes research, critical thinking, and creative problem-solving. Courses are designed for part-time, evening study to accommodate working professionals. All courses are offered on KU’s Edwards Campus.

Admission Requirements

An applicant must hold a bachelor’s degree from an accredited college or university and have a minimum of two years of full-time professional employment in marketing communications or media-related fields.

A student may enter the program in the spring semester, which begins in January. The application deadline is the preceding November 1. A student also may enter in the fall semester, which begins in August. The application deadline is the preceding April 1.

Applicants must submit the following items:

1. Completed application form.
2. Official transcripts of all college-level courses.
3. Scores on the Graduate Record Examination or GRE Writing Assessment or Graduate Management Admission Test. The GRE and/or the GMAT must have been taken within the last five years.
4. Three letters of reference from persons familiar with the applicant’s abilities.
5. Written, one-page statement of the applicant’s academic and professional objectives.
6. Three examples of professional work that reflect the applicant’s years of experience.
7. Nonrefundable application fee:
   - Domestic students applying online ........................................... $45
   - Domestic students applying on paper ....................................... $55
   - International students applying online .................................... $55
   - International students applying on paper ................................ $60

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Course Requirements

A student must complete 36 hours of credit with at least a B (3.0) average. The curriculum includes 33 hours of required courses and 3 hours of electives. The
course of study is designed to be completed in eight sequential semesters over a three-year period. A student must complete the master’s degree program within seven years of admission.

**Required Courses**

- JOUR 820 Marketing Fundamentals for Communicators (3)
- JOUR 821 Integrated Media Selection (3)
- JOUR 822 Case Studies in Marketing Communications (3)
- JOUR 824 Creative Process (3)
- JOUR 825 Relationship Marketing (3)
- JOUR 826 Innovation in Communications (3)
- JOUR 827 Marketing Ethics (3)
- JOUR 828 Strategic Management of Communications (3)
- JOUR 829 Research, Metrics, and Measurement (3)
- JOUR 830 Marketing Communications Project (0)

**Elective Courses**

- JOUR 796 Current Issues in Marketing Communications (0.5-1.0)
- JOUR 797 Special Projects in Marketing Communications (1-3)

Any student who wants to take an elective course outside the school must have permission from both the instructor of the course and from the school. The student should be prepared to indicate how the course contributes to the master’s program.

**Journalism and Mass Communications Courses**

- JOUR 500 Topics in Journalism: _____ (2-3).
- JOUR 502 International Journalism (3) NW.
- JOUR 503 History of Journalism and Mass Communication (3).
- JOUR 506 Directed Studies in Journalism (1-2).
- JOUR 507 Practicum in Journalism (Professional) (1-2).
- JOUR 508 Practicum in Journalism (Academic) (1-2).
- JOUR 512 Principles of Broadcasting, Cable, and New Technologies (3).
- JOUR 513 Principles of Advertising (3).
- JOUR 523 Principles of Public Relations (3).
- JOUR 527 Online Journalism (3).
- JOUR 533 Case Studies in Strategic Communications (3).
- JOUR 534 Diversity and the Media (3).
- JOUR 536 Documentary and Corporate Video (3).
- JOUR 537 Case Studies in Editing (3).
- JOUR 538 International Marketing Communications (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 Advanced Publication Design and Production (3).
- JOUR 568 Marketing and Media Research (3).
- JOUR 572 Sales Strategy (3).
- JOUR 585 Fundamentals of Broadcast Promotion (3).
- JOUR 600 School Journalism and Publications (3).
- JOUR 608 Ethics and the Media (3).
- JOUR 610 Advanced Photographic Journalism (3).
- JOUR 618 First Amendment and Society (3).
- JOUR 626 Long-Form Writing (3).
- JOUR 636 Opinion and Commentary (3).
- JOUR 646 Depth Reporting (3).
- JOUR 667 Fieldwork in Magazines (3).
- JOUR 676 Strategic Campaigns (4).
- JOUR 677 Media Management (3).
- JOUR 692 TV News 1 - Campus Media (3).
- JOUR 693 TV News 2 - Campus Media (3).
- JOUR 694 Online Writing, Design, and Production - Campus Media (3).
- JOUR 695 Newspaper Reporting - Campus Media (3).
- JOUR 696 Newspaper and Online Editing - Campus Media (3).
- JOUR 697 Magazine Editing - Campus Media (3).
- JOUR 698 Media Sales - Campus Media (3).
- JOUR 699 Reporting and Editing for Print and Online (3).

- JOUR 750 Multimedia Management (3). Addresses challenges faced by media managers in developing better-performing media organizations. Special attention is given to the role and scope of leadership within media organizations and to the impact of evolving technologies on organizational performance. Students, many of them working as supervisors, editors, and producers in online, print, broadcast, and strategic communications, engage in classroom discussion and problem-solving opportunities. Emphasis is placed on community stewardship as well as on operational efficiencies. Prerequisite: At least one course from among JOUR 676, JOUR 692, JOUR 693, JOUR 694, JOUR 695, JOUR 696, JOUR 697, and JOUR 698. LEC
- JOUR 795 Current Issues in Marketing Communications (0.5-1). Workshops designed to address current issues in marketing communications are offered each semester. May be repeated for different workshop topics. LEC
- JOUR 796 Skill Development in Marketing Communications (0.5-1). Workshops designed to develop skills used in marketing communications are offered every semester. LEC
- JOUR 797 Special Projects in Marketing Communications (0.5-3). A student may complete a special project addressing a current issue in marketing communications. Departmental permission is required. LEC
- JOUR 799 Survey of Mass Media and Popular Culture (3). Covers the activities, functions, and operations of both traditional mass media and new media. The course provides a combination of historical context, current events, and a future perspective. Topics include the business and economics of the media, the role of the media, and rights and responsibilities. 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 introduction to methodological approaches to the study of media. Qualitative and quantitative methodologies are reviewed. The class emphasis is on learning appropriate research tools to scientifically learn about messages, media, and audiences. Each student devises a research project during the course. Prerequisite: JOUR 801. LEC
- JOUR 815 Investigation and Conference (1-4). 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 820 Marketing Fundamentals for Communicators (3). An understanding of current marketing theory and its relationship to integrated marketing communications. This course examines research methods used for audience identification and methods of gathering and analyzing data to understand the audience and to monitor the responses of customers. LEC
- JOUR 821 Integrated Media Selection (3). An overview of the basic concepts of advertising, public relations, sales promotion, direct marketing, and personal selling. Emphasis is on integration and measurement of the marketing communications plan. LEC
- JOUR 822 Database Development and Management (3). A basic course in creating, updating, and effectively using databases in marketing communications. Students will 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 Case Studies 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 will give 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 lives and individuals who study 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 constituent management, and a review of appropriate marketing communications media. Prerequisite: JOUR 820, JOUR 821, and JOUR 822. LEC
- JOUR 826 Innovation in Communications (3). An examination of the application of Innovation Theory in mass media. The course includes the analysis and understanding of traditional media plus new media. Students study the effects of management, process, product, and marketing innovation as they relate to future use of media in the integrated

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Major areas of graduate study in journalism are News/Information, Strategic Communications, and Marketing Communications. Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

marketing process. Prerequisite: JOUR 820, JOUR 821, and JOUR 822. LEC
JOUR 827 Marketing Ethics (3). An examination of the ethical issues, philosophies, and decision-making systems that affect marketing communications. Through studies of specific business cases, students gain insight into the cultural, legal, and social decisions that affect an organization’s future. Prerequisite: JOUR 820 and JOUR 821. LEC
JOUR 828 Strategic Management of Communications (3). An overview of the critical components of strategic marketing communications. Students are exposed to the fundamentals of analysis, planning, implementation, and control of marketing communications programs used by organizations and entrepreneurs. Emphasis is on how these programs support the strategic goals of the organization and the basic concepts of accountability in marketing communications. Prerequisite: 21 hours of required Marketing Communications course work. LEC
JOUR 829 Research, Metrics, and Measurement (3). An overview of the research, metrics, and measurement tools commonly used by corporations or organizations to evaluate performance. The class emphasis is on learning the appropriate tools and how to implement and integrate them into marketing communications projects. Prerequisite: 21 hours of required Marketing Communications course work. LEC
JOUR 830 Marketing Communications Project (1-3). A detailed focus on planning and executing a project to meet the marketing communications needs of an actual client or writing an original and publishable paper. Individual students use the skills acquired in the marketing communication curriculum to complete the project. This course, which can be completed over two semesters, meets the final requirement of the Master of Science degree in Journalism. Prerequisite: 27 hours of required Marketing Communications course work completed. LEC
JOUR 840 Seminar in: ______ (3). Research in the issues and development of media. Seminars focus on topics of current and historical interest. Students develop projects and presentations in special areas of interest and expertise. Course may be repeated under different topics. Prerequisite: JOUR 799, JOUR 801, and 15 hours of graduate course work completed. LEC
JOUR 841 Seminar in First Amendment (3). Examination of and research in topics such as libel, privacy, and First Amendment applications of the law. Covers news and persuasive uses of media. Prerequisite: JOUR 799, JOUR 801, and 15 hours of graduate course work completed. LEC
JOUR 897 Project/Thesis Development (3). This course guides preparation for and development of a media research project, research project, or master's thesis. Each student produces a research question or hypothesis and research design, plus a preliminary review of the literature. To enroll in this course, a student must have an approved topic and an assigned project or thesis chair. Prerequisite: JOUR 799, JOUR 802, and 18 hours of graduate course work completed. LEC
JOUR 898 Master's Project (1-3). The student executes a research project intended for a professional audience, or a professional media project intended for publication or distribution to a general or targeted audience. Prerequisite: JOUR 897, satisfactory completion of qualifying examination, and 24 hours of graduate course work completed. RSH
JOUR 899 Master's Thesis (1-3). The student executes a research project on a subject of primarily theoretical interest, intended for an academic audience. Prerequisite: JOUR 897, satisfactory completion of qualifying examination, and 24 hours of graduate course work completed. RSH
College of Liberal Arts and Sciences

Kim A. Wilcox, Dean
Strong Hall, 1450 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7535, (785) 864-3661

Requirements of the College .................... 195
Nondegree & Certificate-seeking Students .... 195
Degree-seeking Students ............................. 195
Enrollment (Degree, Nondegree, Certificate) .. 196
Grading ....................................................... 196
Probation & Dismissal Guidelines ................. 196
Master's Degrees .......................................... 196
Doctor of Philosophy Degree ....................... 197

International Studies Centers .................... 197
African Studies Resource Center ................. 197
Center for East Asian Studies ..................... 197
Center for European Studies ....................... 197
Center for Russian and East European Studies .. 197
Center of Latin American Studies ................. 198
International Theatre Studies Center .......... 198

Majors ....................................................... 198
African & African-American Studies Courses .. 198
Haitian Courses ........................................... 199
American Studies ......................................... 199
American Studies Courses ......................... 200
Anthropology .............................................. 201
Anthropology Courses ................................. 202
Biological Sciences ..................................... 204
Greek Courses ............................................. 210
Latin Courses ............................................ 219
Clinical Child Psychology ........................... 219
Communication Studies .............................. 220
Communication Studies Courses ................. 221
Communicative Disorders .......................... 223
Speech-Language-Hearing Courses .............. 224
East Asian Languages & Cultures ............... 226
Chinese Courses ......................................... 227
East Asian Languages & Cultures Courses ..... 227
Japanese Courses ........................................ 228
Korean Courses .......................................... 228
Economics ................................................ 228
Economics Courses .................................... 230
English ...................................................... 232
English Courses ........................................ 234
European Studies ....................................... 235
European Studies Courses .......................... 235
French & Italian ......................................... 235
French Courses .......................................... 236
Italian Courses .......................................... 237
Geography ............................................... 237
Geography Courses .................................... 238
Geology ..................................................... 240
Geology Courses ....................................... 241

Germanic Languages & Literatures ............. 243
German Courses ......................................... 244
Scandinavian Courses ................................ 245
Gerontology .............................................. 245
Government .............................................. 247
Political Science ........................................ 247
Political Science Courses ......................... 248
Public Administration ................................ 252
Public Administration Courses ................... 253
History ..................................................... 254
History Courses ........................................ 255
History of Art Courses ............................... 259
History of Art Courses ............................... 260
Human Development & Family Life ............. 261
Human Development & Family Life Courses ... 263
Humanities & Western Civilization ............... 268
Humanities & Western Civilization Courses ... 269
Indigenous Nations Studies ....................... 269
Indigenous Nations Studies Courses .......... 271
Interdisciplinary Studies Program ............... 271
International Studies Program .................... 271
International Studies Courses .................... 272
Latin American Area Studies ...................... 274
Latin American Area Courses ..................... 276
Liberal Arts & Sciences .............................. 276
Liberal Arts & Sciences Courses ................. 276
Linguistics ............................................... 277
Linguistics Courses .................................... 278
Mathematics .............................................. 278
Mathematics Courses ................................ 280
Museum Studies ........................................ 282
Museum Studies Courses ............................ 282
Philosophy ............................................... 283
Philosophy Courses .................................... 285
Physics & Astronomy .................................. 286
Physics & Astronomy Courses ..................... 289
Astronomy Courses ..................................... 289
Atmospheric Science Courses .................... 289
Physics Courses ........................................ 289
Psychology ............................................... 291
Psychology Courses ................................... 293
Religious Studies ....................................... 298
Hebrew Courses ....................................... 299
Religious Studies Courses .......................... 299
Russian & East European Studies ............... 300
Russian & East European Courses ............... 301
Slavic Languages & Literatures ................. 302
Croatian & Serbian Courses ....................... 303
Czech Course ............................................ 303
Polish Courses .......................................... 303
Russian Courses ........................................ 303
Slavic Languages & Literatures Courses ..... 303
Turkish Course .......................................... 304
Ukrainian Courses ..................................... 304
Sociology ................................................ 305
Sociology Courses ..................................... 306
Spanish & Portuguese ............................... 307
Portuguese Courses ................................... 308
Spanish Courses ........................................ 308
Speech-Language-Hearing .......................... 310
Theatre & Film .......................................... 310
Theatre & Film Courses .............................. 311
Women's Studies ........................................ 313
Women's Studies Courses .......................... 314
College of Liberal Arts and Sciences

Kim A. Wilcox, Dean
John Gronbeck-Tedesco, Associate Dean
Strong Hall, 1450 Jayhawk Blvd., Room 200, Lawrence, KS 66045-7535
Phone: (785) 864-3661, Fax: (785) 864-3700 clasgrad@ku.edu or www.ku.edu/~clas

The College of Liberal Arts and Sciences offers graduate programs in 44 disciplines and several interdisciplinary areas. The College’s participation in graduate education reflects a long and distinguished commitment to higher learning across the liberal arts. It is the students’ responsibility to become thoroughly acquainted with all requirements for the degree programs in which they plan to participate. The student is subject to the regulations in force at the time of admission to the Graduate School as a degree-seeking student. If degree requirements change, the student may opt for the new requirements or continue under the regulations in force at the time of admission.

Requirements of the College

Nondegree and Certificate-seeking Students
Under certain limited circumstances, students may enroll as nondegree graduate students. This status is best suited to students who plan to transfer graduate courses at KU to a degree program at another university or who are exploring the option of graduate school but have not yet been admitted to a graduate program. Students seeking certificates also may need to use nondegree status. This status carries the following limitations, of which potential nondegree 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.
• Nondegree and certificate-seeking students enroll last during main enrollment.
• Student loans may not be deferred.

Admission. An applicant may seek admission to a program or department. Check with departments and programs for materials they require. Materials required by the Graduate School are
• Graduate Application, online at www.graduate.ku.edu.
• Original transcript(s) of any college work (must show conferred 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.

Admission Categories. Nondegree A: Students who are regularly admissible (grade-point average of 3.0 or higher on a 4.0 scale). A student can earn a maximum of 12 hours that can be applied toward a degree (if the department is willing to accept the courses).

Nondegree C: Students who are not regularly admissible because of grade-point average or who are enrolled only in workshops. A student can earn a maximum of 6 hours that may be applied toward a degree (8 hours if the student earned an undergraduate degree from KU).

Certificate: Students who are admissible under conditions stipulated by a specific certificate program.

Probation/Dismissal Policy for Graduate Nondegree and Certificate Students. If a graduate nondegree or certificate-seeking student has a cumulative grade-point average below 3.0, the Graduate School sends the student a warning letter stating that if the cumulative grade-point average does not rise to 3.0 in the next academic semester, the student will be dismissed.

If a department dismisses a student, he or she cannot be readmitted as a graduate student.

Degree-seeking Students
Admission. A nonrefundable application fee payable to the University of Kansas is required.

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic students applying online</td>
<td>$45</td>
</tr>
<tr>
<td>Domestic students applying on paper</td>
<td>$55</td>
</tr>
<tr>
<td>International students applying online</td>
<td>$55</td>
</tr>
<tr>
<td>International students applying on paper</td>
<td>$60</td>
</tr>
</tbody>
</table>

To be admitted to the Graduate School, a student must have a baccalaureate degree from an accredited institution, or the equivalent thereof from a university abroad. Requests for exemption from this regulation must be forwarded with departmental endorsement to the dean of the Graduate School.

If an applicant has a cumulative grade-point average lower than 3.0 on a 4.0 scale, that student must have a combined junior/senior grade-point average of 3.0 to be considered for admission to a degree program with regular status. This applies only to degrees granted by domestic institutions that have KU-equivalent requirements for an undergraduate degree. See Admission in the General Information chapter of this catalog.

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 either of these minimum grade-point average requirements. These students are admitted provisionally or on probation. The requirements for achieving good standing as a graduate student are...
Each student is responsible for conforming with the regulations in this catalog and any others that may be required.

The student is subject to the regulations in force at the time of admission to the Graduate School.

Requirements of the College

specified in the letter of admission. Generally, achieving 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 the applications are received in the Graduate School office 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. A graduate student’s enrollment must reflect his or her use of university resources. 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 special 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.

Undergraduate Students Enrolling in Graduate-level Classes (800 and 900). Undergraduate students wishing to receive undergraduate credit in 800- or 900-level graduate courses must have the approval of the Graduate School. First, obtain an ARTS form from the Undergraduate Center, plus a letter of consent from the instructor. Normally a grade-point average of 3.0 is required.

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.

Grading
The +/- grading system is not used in the College of Liberal Arts and Sciences. The Credit/No Credit system is not used in the Graduate School. This is true for all courses, graduate and undergraduate.

Probation and Dismissal Guidelines
To be in good standing, a student must maintain a 3.0 cumulative grade-point average; when the grade-point average falls below 3.0, the Graduate School notifies the department that the student should be placed on probation. This action is followed by a letter to the student from the Graduate School 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 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 to the Graduate School explaining why the student should be allowed to continue.

A graduate student can be dismissed from the Graduate School upon recommendation of the student’s department. Academic dismissal should occur before a given semester; however, 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 Graduate School also notifies the student 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 is also cause for dismissal.

Master’s Degrees
Students have seven years in which to complete the work for a master’s degree, with the possibility of a one-year extension by petitioning the Graduate School. No leaves of absence are given. 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 department handbook.

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. However, certain departments have rules governing summer enrollment. The number of hours of enrollment is determined by the degree program involved.

All materials relative to the completion of a master’s degree—unbound copies of the thesis, results of the final oral examination, etc.—must be in the Graduate School by the end of the first two weeks of any fall or spring semester 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 thesis programs, when the thesis has been substantially completed. A thesis defense may be a part of the requirements for the degree but does not take the place of the required general examination in the major field. 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 can be obtained from the Graduate School.

Readmission after Five Years’ Absence. Students who have been absent from the university for more than five years must apply for readmission to the degree program and the Graduate School. If degree requirements have changed, the readmitted student is expected to meet the requirements in effect at the time of readmission.
Doctor of Philosophy Degree

A total of 10 years (20 enrolled semesters) is allowed to complete both the master’s and the Ph.D. If the student either enters with a master’s degree or bypasses to the Ph.D., a total of eight years is allowed.

A one-year time extension is allowed, 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. Please check your departmental handbook.

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.

Readmission after Five Years’ Absence. After an absence of five years, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate School in order to continue. This includes students who have received approved leaves of absence for five years. If degree requirements have changed, the readmitted student is expected to meet the requirements in effect at the time of readmission. See also Doctoral Degree Requirements, Program Time Constraints 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 to the Graduate School on a Do-all form. The skill should be described in words; a list of course numbers or titles is not acceptable. Proficiency in a research skill must have been demonstrated within the last five years. The research skill must be completed before the oral comprehensive examination can be taken.

Comprehensive Oral Examination. This examination covers the major field and any extradepartmental work for which the department 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 from the Graduate School. All materials relative to the completion of a doctoral degree—unbound copies of the dissertation, results of the final oral examination, etc.—must be in the Graduate School by the end of the first two weeks of a semester or the first week of the summer session, if the student does not plan to enroll in dissertation hours.

Maximum Time Allowed for Submitting the Thesis or Dissertation. Effective April 1, 1995, a period of six months from defense of the thesis or dissertation is allowed for students to make revisions and to submit the final manuscript to the Graduate School or the department or both. During this time, the student must be enrolled in at least 1 hour of dissertation credit (or more if required by the department). Students who do not submit the manuscript within the six-month time limit must enroll in 3 hours per semester until the thesis or dissertation is finished.

International Studies Centers

African Studies Resource Center
Director: John M. Janzen, afctr@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 9
Lawrence, KS 66045-7574, www.ku.edu/~asrc
(785) 864-3054, fax: (785) 864-5330

The 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. It sponsors research, 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
Acting Director: Bill Tsutsui
Lippincott Hall, 1410 Jayhawk Blvd., Room 205
Lawrence, KS 66045-7515
(785) 864-3849, fax: (785) 864-5034
www.ceas.ku.edu

The center is a National Resource Center funded by the U.S. government for the study of East Asia. It promotes East Asian language and area studies; coordinates interdisciplinary activities on campus; works with the East Asian Library; advises students in East Asian studies; awards Foreign Language and Area Studies Fellowships in Chinese, Japanese, and Korean; and administers the KU Summer Institute at Kanagawa University in Hiratsuka, Japan. It 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 66045-7574, (785) 864-9070
www.ku.edu/~ces

The center 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, 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 theory, and international business, contribute to programs, research, conference series, outreach, and exchanges dealing with the European community.

Center for Russian and East European Studies
Director: Paul D’Anieri
Bailey Hall, 1440 Jayhawk Blvd., Room 311
Lawrence, KS 66045-7574, www.ku.edu/~crees
(785) 864-4236, fax: (785) 864-3242
The center is one of 13 Comprehensive National Resource Centers funded by Title VI of the U.S. Higher Education Act for the study of Russia, Ukraine, East/ Central Europe, and the Balkans. It promotes language and area study in an integrated, interdisciplinary framework and in traditional academic disciplines. It administers B.A. co-major and M.A. degree programs and supports study abroad in Russia, Poland, Croatia, and Ukraine. Each year, visiting scholars from the region join KU’s 45 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.

Center of Latin American Studies
Director: Elizabeth Kuznesof
Bailey Hall, 1440 Jayhawk Blvd., Room 311
Lawrence, KS 66045-7574, www.ku.edu/~latamst
(785) 864-4213, fax: (785) 864-3800
The center is one of 13 Comprehensive National Resource Centers funded by Title VI of the U.S. Higher Education Act for the study of Latin America. It promotes interdisciplinary study, administers bachelor’s and master’s degree programs, awards Foreign Language and Area Studies and Tinker Fellowships, and coordinates research activities. Areas of particular strength are Central America, Mexico, Brazil, and Paraguay. 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 (San José), Brazil (Vitoria), and Mexico (Guadalajara). The center offers outreach to schools, businesses, and the community and serves as a resource for the state, the region, and the nation.

International Theatre Studies Center
Director: John Sweets
Murphy Hall, 1530 Naismith Dr., Room 339
Lawrence, KS 66045-3102
(785) 864-3534, fax: (785) 864-5251
The center coordinates activities related to international theatre. It facilitates KU faculty and graduate student travel and helps bring foreign performers and companies, as well as visiting faculty and students from other institutions, to KU.

MAJORS

African and African-American Studies
Chair: Peter Ukpokodu, afs@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 9
Lawrence, KS 66045-7574, www.ku.edu/~afs
(785) 864-3054, fax: (785) 864-5330
Professors: Freeman, Ukpokodu
Professor Emeritus: Drayton
Associate Professors: Gordon, Mack, Myers, Pennington
Assistant Professors: Herbison, MacGonagle, Omar, Williams

The Department of African and African-American Studies focuses on the study of Africa, African America, and the Afro-Caribbean. Although the department does not offer advanced degrees, graduate courses are available to persons working toward interdisciplinary M.A., Ph.D., or other advanced degrees in participating disciplines or other departments and programs.

Student Concentrations

African Studies

Comparative black studies focuses on the study of Africa, African America, and the Afro-Caribbean. Although the department does not offer advanced degrees, graduate courses are available to persons working toward interdisciplinary M.A., Ph.D., or other advanced degrees in participating disciplines or other departments and programs.

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, and social and cultural theory.

Permanent exhibits are open in KU’s Natural History Museum and Biodiversity Research Center and in Spencer Museum of Art.

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, and social and cultural theory.

Permanent exhibits are open in KU’s Natural History Museum and Biodiversity Research Center and in Spencer Museum of Art.

International Theatre Studies Center
Director: John Sweets
Murphy Hall, 1530 Naismith Dr., Room 339
Lawrence, KS 66045-3102
(785) 864-3534, fax: (785) 864-5251
The center coordinates activities related to international theatre. It facilitates KU faculty and graduate student travel and helps bring foreign performers and companies, as well as visiting faculty and students from other institutions, to KU.

MAJORS

African and African-American Studies
Chair: Peter Ukpokodu, afs@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 9
Lawrence, KS 66045-7574, www.ku.edu/~afs
(785) 864-3054, fax: (785) 864-5330
Professors: Freeman, Ukpokodu
Professor Emeritus: Drayton
Associate Professors: Gordon, Mack, Myers, Pennington
Assistant Professors: Herbison, MacGonagle, Omar, Williams

The Department of African and African-American Studies focuses on the study of Africa, African America, and the Afro-Caribbean. Although the department does not offer advanced degrees, graduate courses are available to persons working toward interdisciplinary M.A., Ph.D., or other advanced degrees in participating disciplines or other departments and programs.

Student Concentrations

African Studies

Comparative black studies focuses on the study of Africa, African America, and the Afro-Caribbean. Although the department does not offer advanced degrees, graduate courses are available to persons working toward interdisciplinary M.A., Ph.D., or other advanced degrees in participating disciplines or other departments and programs.

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, and social and cultural theory.

Permanent exhibits are open in KU’s Natural History Museum and Biodiversity Research Center and in Spencer Museum of Art.

International Theatre Studies Center
Director: John Sweets
Murphy Hall, 1530 Naismith Dr., Room 339
Lawrence, KS 66045-3102
(785) 864-3534, fax: (785) 864-5251
The center coordinates activities related to international theatre. It facilitates KU faculty and graduate student travel and helps bring foreign performers and companies, as well as visiting faculty and students from other institutions, to KU.
American & African-American Studies; American Studies

The following courses are cross-referenced as available to or recommended for students in African and American Studies:

HIST 616 Contemporary America, 1941-Present
LING 791 Topics in Linguistics:
TH&F 826 Seminar in African Theatre

Haitian Courses
HAIT 700 Investigation and Conference (1-6). Supervised individual readings in selected areas of Haitian language, literature, and culture. Individual reports and conferences. Prerequisite: Consent of instructor. RSH

American Studies
Chair: Norman Yetman
Graduate Director: Cheryl Lester
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7574, (785) 864-4011
www.ku.edu/~amerst

Professors: Katzman, Schofield, Tuttle, Yetman
Associate Professor: Lester
Associate Professor Emeritus: Steere
Assistant Professors: Clark, Tucker


American studies is an interdisciplinary program offering graduate work on society and culture in the United States—past, present, and in global context. The program accommodates a variety of individual academic objectives. We ask all students to define a concentration—a period or problem—and to draw on the appropriate resources of the university 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 School.

Submit your application to the Graduate School online at www.graduat.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 and Urban Design 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 on the combined program, consult the respective program chairs.

See also Urban Planning in the School of Architecture and Urban Design program.

American Studies, M.A. in Museum Studies
The graduate program in museum studies offers training to those who plan to pursue professional careers in museums or historical agencies. Its curriculum provides a basic understanding of the nature of museums and historical agencies as well as specialized training administered by the American studies program. See the Museum Studies graduate brochure for details. Students must complete a minimum of 42 hours of course work, including 18 hours of core courses in museum studies, 18 hours of required American studies courses, 6 hours of apprenticeship, and an oral examination.

Ph.D. Degree Requirements
Beyond the master’s degree and in addition to the general requirements of the Graduate School, 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 Department of Anthropology has strengths in applied anthropology, anthropological genetics, evolutionary studies, medical anthropology, Native American languages, paleoanthropology, New World and European prehistory, visual anthropology, and zooarchaeology. The multimedia laboratory specializes in applied visual ethnographies.

American Studies

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, he or she 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.

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 Graduate School regulations, departmental procedures, and the rationale behind these regulations. Copies are available on request from the departmental office.

American Studies Courses

AMS 501 Community Development (3).
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 522 American Racial and Ethnic Relations (3).
AMS 529 Race and the American Theatre (3).
AMS 576 Cultural Geography of the United States (3).
AMS 579 Geography of American Foodways (3).
AMS 580 American Art (3).
AMS 629 Sociology of Sport (3).
AMS 650 Jazz and American Culture (3).
AMS 677 The American Novel in the 19th Century (3).
AMS 678 The Modern American Novel (3).
AMS 694 Directed Readings (1-4).
AMS 696 Studies in: ______ (1-4).
AMS 700 Introduction to Museum Exhibits (3). Presentation of principles and practices of exhibit management, design, and production. Topics will include developing a master plan for an exhibit; 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; publicizing; 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 ANTH 793, BIOL 787, GEOL 781, HIST 725, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 714 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 changing practices regarding conservation techniques. Emphasis will be placed on detection and identification 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 ANTH 700, BIOL 700, GEOL 780, HIST 722, and MUSE 706.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 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 ANTH 705, BIOL 788, GEOL 782, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 725 Historical Administration/Museum Studies Workshop: (1-5). Short term, intensive workshops presented to provide specialized background in a variety of skills required in historical archives or museums. (Same as ANTH 791.) LEC
AMS 730 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 ANTH 798, BIOL 788, GEOL 785, HIST 725 and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 731 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 ANTH 796, BIOL 787, GEOL 785, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 737 Music in America (3). A survey of historical developments from the Pilgrims to the present. (Same as MUSC 739.) Prerequisite: One course in the field of music history and literature or consent of instructor. LEC
AMS 747 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 COMS 787, HDFL 787, PSYC 787, and SOC 767.) LEC
AMS 787 Field Work (1-12). Supervised field research in aspects of American civilization. Prerequisite: Consent of instructor. LEC
AMS 797 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 in research, collection care and management, public education, and exhibits with emphasis to the particular requirements of each student. (Same as ANTH 799, BIOL 799, GEOL 725, HIST 799, and MUSE 799.) LEC
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, logics, and procedures involved in various approaches to understanding American 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 at 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
The department offers graduate training in archaeology, biological anthropology, anthropological linguistics, and social/cultural anthropology. The department is closely associated with the nearby Museum of Anthropology and the Laboratory of Biological Anthropology.

**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, and 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 only 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 students with a master’s degree in anthropology from another institution may apply directly to the Ph.D. program.

Submit your application to the Graduate School online at [www.graduate.ku.edu](http://www.graduate.ku.edu). Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

**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 subdisciplinary 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 and demonstrate competence in another research skill relevant to the student's special research requirements 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 by the Graduate School, 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 research skills requirement, the student should notify the graduate coordinator, who enters it in the student's permanent record and notifies the Graduate School.

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 has been 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, on the departmental Web page, or on the Graduate Student Organization Web page: www.ku.edu/~gsanth.

- 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 511 The Celts (3).
  ANTH 512 Ethnohistory: ______ (3).
  ANTH 513 La France Avant La Gaule: France Before the Romans (3).
  ANTH 514 The Near East in Prehistory (3).
  ANTH 515 Topics in Old World Prehistory: ______ (3).
  ANTH 516 Hunters and Gatherers (3).
  ANTH 517 Geoarchaeology (3).
  ANTH 518 Environment and Archaeology (3).
  ANTH 519 Lithic Technology (3).
  ANTH 520 Archaeological Ceramics (3).
  ANTH 521 Zoarchaeology (3).
  ANTH 522 Paleoethnobotany (3).
  ANTH 540 Demographic Anthropology (3).
  ANTH 542 Biology of Human Nutrition (4).
  ANTH 543 Anthropology of Food and Nutrition (3).
  ANTH 544 Physical Anthropology of American Indians (3).
  ANTH 545 Contemporary Health Issues in Africa (3).
  ANTH 549 Human Paleontology: Fossil Apes to Australopithecus (3).
  ANTH 550 Human Paleontology: Homo Erectus to Homo Sapiens (3).
  ANTH 552 Museum Studies: 明星 American Culture (3).
  ANTH 553 Cultural Diversity in the United States (3) SC.
  ANTH 565 Popular Images in Japanese Culture, Literatures, and Films (3) NW.
  ANTH 567 Japanese Ghosts and Demons (3) NW.
  ANTH 571 Violence, Aggression, and Terrorism in the Modern World (3).
  ANTH 580 Feminism and Anthropology (3).
  ANTH 582 Ethnobotany (3).
  ANTH 586 Visual Anthropology (3).
  ANTH 595 The Colonial Experience (3) NW.
  ANTH 648 Human Osteology (4).
  ANTH 650 Human Reproduction: Biology and Behavior (3).
  ANTH 652 Population Dynamics (3).
  ANTH 661 Cultural Dynamics (3).
  ANTH 662 Economic Anthropology (3).
  ANTH 665 Women, Health, and Healing in Latin America (3).
  ANTH 666 Anthropology of Religion (3).
  ANTH 667 Primitive Mythology (3).
  ANTH 670 Contemporary American Culture (3).
  ANTH 674 Political Anthropology (3).
  ANTH 675 Anthropology of Law (3).
  ANTH 680 Culture and Human Biology (3).
  ANTH 684 Anthropology and the Health Sciences (3).
  ANTH 695 Cultural Ecology (3).
  ANTH 699 The Anthropology Museum (3).
  ANTH 700 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 changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic 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, HIST 722, and MUSE 760.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
  ANTH 701 History of Anthropology (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
  ANTH 702 Current Archaeology (3). An introduction to fundamental theoretical orientations and methodological approaches in world ar-
ANTH 703 Current Biological Anthropology (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

ANTH 704 Current Cultural Anthropology (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

ANTH 705 Technological Change: _____ (3). Studies in technological change through invention, evolution, and diffusion. Topic for semester to be announced. LEC

ANTH 710 History of American Archaeology (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

ANTH 715 Seminar in Plains Archaeology: _____ (2-4). Problems in the archaeology of the Great Plains region, with an emphasis on prehistoric developments. LEC

ANTH 718 Seminar in Latin American Archaeology: (3). In-depth examination of specific problems and case studies in the pre-Columbian 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

ANTH 720 Seminar in Old World Prehistory: (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

ANTH 730 Linguistics in Anthropology (3). The study of language as it concerns anthropology. Language systems in relation to culture, language taxonomy, semantics, linguistic analysis as an ethnographic tool. (Same as LING 750.) Prerequisite: Graduate standing. LEC

ANTH 740 Linguistic Data Processing (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 of 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 760 or permission of instructor. LEC

ANTH 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 phonetic transcription, grammatical annotation, and analysis of language context. (Same as LING 741.) Prerequisite: LING 750 or permission of instructor. LEC

ANTH 747 North American Indian Languages (3). Introduction to the nature and distribution of North American Indian languages. Prerequisite: ANTH 306, ANTH 430 or ANTH 730. LEC

ANTH 750 Disease and Adaptation (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: Consent of instructor or graduate standing. LEC

ANTH 754 Biological Bases of Human Behavior (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, kinematics, and learning. Several abnormal conditions, such as schizophrenia, chromosomal aberrations, alcoholism, and brain dysfunction are discussed in terms of the genetic and environmental interactions. (Same as ANTH 754.) Prerequisite: ANTH 652 or consent of instructor. LEC

ANTH 759 Dental Anthropology (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

ANTH 761 Introduction to Medical Anthropology (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 111 with more advanced requirements. Prerequisite: Consent of instructor or graduate standing. LEC

ANTH 762 Human Growth and Development (3). Consideration of comparative physical growth patterns throughout the human life cycle. Sex and population differences in anthropometric 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). 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 770 Research Methods 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). Intensive consideration of special problems in cultural anthropology. Topic for semester to be announced. LEC

ANTH 778 Seminar in Applied Cultural Anthropology (3). Selected problems in applying anthropological theory, methods, and findings in programs of directed social change. 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: Graduate standing or consent of instructor. LEC

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, a representation of a culture (or selected aspects of a culture), is 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). 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 explore issues of visual production, video production, and non-linear 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 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 contemporary theories, research, and pedagogies informing the 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 WS 789.) Prerequisite: Permission of instructor. LEC

ANTH 791 Museum Studies Workshop: _____ (1-3). Short-term, intensive workshops presented to provide specialized background in a variety of skills required in historical archives or museums. (Same as AMS 725.) FLD

ANTH 793 Introduction to Museum Exhibits (3). This course will consider the role of exhibits as an integrated 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 program in both large and small museums in the major disciplines. (Same as AMS 700, BIOL 787, GEOL 781, HIST 725, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or 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. The course will make wide use of objects from the Museum of Anthropology. LEC

ANTH 795 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, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 796 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, BIOL 785, GEOL 783, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 797 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, HIST 721, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 798 The Nature of Museums (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, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 799 Anthropology 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. Limit of six hours credit for the M.A. degree. (Same as AMS 799, BIOL 799, GEOL 723, HIST 799, and MUSE 799.) Prerequisite: None. Same as AMS 799. FLD

ANTH 801 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 in archaeological research. 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 834 Culture and Nursing (3). This is a seminar exploring methods of cultural assessment and their application to the practice of clinical nursing. Students will examine aspects of their own behavior which are related to professional socialization and membership in the dominant culture, as well as changing health beliefs and behaviors of individuals who are members of other cultural groups. Such groups may be defined by ethnicity, occupation, social class, religious affiliation, foreign culture, or adherence to alternative therapies. Points of similarity as well as adequate health care will be discussed. Prerequisite: Consent of instructor. LEC

ANTH 849 Seminar in Archaeology: _ (2-4). Subject matter of seminar to be announced for semester. LEC

ANTH 851 Data Analysis in Archaeology: _ (1-4). 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 methodologies, analytical procedures, application of multivariate statistics, and computer applications. Topic for semester to be announced. FLD

ANTH 853 Theory and Current Problems in Archaeology (3). Consideration of scientific methodology, basic assumptions of anthropological archaeology, relationship of archaeology and anthropology, and current theoretical and methodological trends in archaeology. LEC

ANTH 876 Medical Anthropology: _ (3-6). This course provides advanced training in selected areas of medical anthropology. The topic for a particular semester will reflect the interests of the instructor. It is expected that the course content will alternate between theoretical and applied emphases. May be repeated for a total of six hours credit. Prerequisite: ANTH 461 or consent of instructor. LEC

ANTH 879 Human Biology and Cultural Behavior (3). The effects of population size, structure, and mobility are examined in light of their influence on human evolution. Assortative mating, prescribed marriage patterns and other restrictions on choice of mate, as well as adaptive processes in stressful environments, are considered as forces for genetic change. Prerequisite: Consent of instructor. LEC

ANTH 880 Advanced Feminist Anthropology: _ (3-6). Intensive consideration of special problems in feminist anthropology. Topic for the semester to be announced. May be repeated for a total of six hours credit. (Same as WS 880.) Prerequisite: Permission of instructor. LEC

ANTH 889 Summer Archaeological Field Work (1-8). Under the direction of a professional archaeological, undergraduate and graduate students are taught proper procedures for the excavation and laboratory analysis of 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 (1-4). 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. RSH

ANTH 996 Graduate Research (1-9). Individual investigation of special problems in anthropology. RSH

ANTH 999 Doctoral Dissertation (1-12). RSH

The following courses are cross-referenced as available to or recommended for students in Anthropology:

ANTH 728, ANTH 851, ANTH 889, ANTH 890, ANTH 896, ANTH 899, ANTH 996, ANTH 999

ANTH 801, ANTH 811, ANTH 851

ART History
See History of Art.

Astronomy
See Physics and Astronomy.

Atmospheric Science
See Physics and Astronomy.

Biochemistry
See Biological Sciences: Molecular Biosciences.

Biological Sciences
Chair: James A. Orr
Haworth Hall, 1200 Sunnyside Ave., Room 2045
Lawrence, KS 66045-7534, (785) 864-4301

The Division of Biological Sciences includes the Departments of Ecology and Evolutionary Biology and Molecular Biosciences. The division administers the genetics program and the undergraduate program in biology. Both departments offer programs leading to Master of Arts or Doctor of Philosophy degrees. Each offers graduate study specialties (e.g., biochemistry and biophysics; molecular, cellular, and developmental biology; microbiology; neurobiology; ecology and population biology; entomology; plant biology; and systematics, biodiversity, and macroevolution). For information on specialties and details about 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

Chair: Craig E. Martin, ecophys@ku.edu
Haworth Hall, 1200 Sunnyside Ave., Room 8020
Lawrence, KS 66045-7534, (785) 864-3645
www.ku.edu/~eeb

Graduate Adviser: Catherine Loudon, loudon@ku.edu,
6002 Haworth Hall, (785) 864-4398
Graduate Program Coordinator: Jeannie Houts,
clincoln@ku.edu, 2041 Haworth Hall, (785) 864-2362

Professors: H. Alexander, Ashe, deNoyelles, Fautin,
Greenfield, Hauffer, Jander, Krishalka, C. Martin,
L. Martin, Martinko, Prum, Slade, V. Smith, Soberón,
E. Taylor, O. Taylor, T. Taylor, Thorp, Trueb, Wiley
Courtesy Professors: Burg, Busby, Cutler, Freeman,
Kindscher, Lieberman, Loeb, Terwilliger
Adjunct Professors: Crawford, J. Foster
Professors Emeriti: Armitage, Byers, Coil, Duellman,
Fitch, Humphrey, Johnston, Lichtwardt, Michener,
Schlager, Torres, Wells
Associate Professors: deBoer, Dimmick, Loudon,
Petersen, Pierotti, D. Smith, Tian, Timm
Assistant Professors: D. Alexander, Currie, Engel,
B. Foster, Gleason, Kelly, Mort, Orive, Ward

The department offers graduate study leading to Master of Arts and Doctor of Philosophy degrees in biology in various research specialties. The department comprises formal programs in ecology and population biology; entomology; plant biology; and systematics, biodiversity, and macroevolution. General information about the department, admission, and financial support may be found at the Web address above.

The department’s physical facilities include laboratories, working museum collections, and field-study sites near KU. Most laboratory facilities are in Dyche and Snow Halls, the McGregor Herbarium, and in Haworth Hall. Museum collections are part of the Biodiversity Research Center and include nearly one million vertebrate specimens, an estimated one million invertebrate fossils (excluding microfossils), 3.2 million pinned insects, and numerous mites and minute insects preserved in liquid. The Biodiversity Research Center also has an extensive collection of fossil plants and 300,000 extant plants. The Kansas Field Station and Ecological Reserves offer diverse habitats and facilities for local field research. These areas include the Pitch Natural History Reservation (590 acres), the Rockefeller Experimental Tract (160 acres), the Breidenthal Biological Reserve (70 acres), the John H. Nelson Environmental Study Area (560 acres), 72 experimental fish ponds and a reservoir, and a Biotic Succession Facility. The Kansas Biological Survey, a state research agency at KU, operates state-of-the-art laboratories in support of aquatic ecotoxicology and water chemistry, floral and faunal inventories, remote sensing, and geographic information systems technologies. Field studies also are carried out by faculty and students in diverse areas, including the Neotropical Americas, Africa, Asia, and Antarctica. KU is a charter member of the Organization for Tropical Studies, which provides tropical field experience and training in Costa Rica.

Admission

General information on admission and financial aid is available online at www.ku.edu/~eeb. Send inquiries to the graduate program coordinator. The departmental graduate 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. Students must provide certified scores on the Graduate Record Examination for the general test. Non-English-speaking applicants must provide certified scores on the Test of English as a Foreign Language. 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 statement-of-goals essay are particularly important. Students must have a faculty sponsor before admission. Applicants are encouraged to correspond with one or more potential faculty 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. The master’s degree is not a prerequisite for entering a Ph.D. program. Those planning to earn a Ph.D. should apply directly to the Ph.D. program; they may earn a master’s en route.

Submit your application to the Graduate School online at www.graduated.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements: Botany, Entomology, or Biology (Specialty)

Two options leading to the Master of Arts are offered. The student and the advisory committee determine the precise requirements for both. This committee consists of three members of the graduate faculty. Option I is research-oriented and requires a thesis or its equivalent. Option II emphasizes broader graduate training rather than concentration on research.

Option I. Option I requires the following:
1. A minimum of 30 graduate hours in courses numbered 500 or above in ecology and evolutionary biology and related fields; no more than 10 hours in thesis or graduate research may count toward the 30 hours.
2. A thesis on original research.
3. Acceptable presentation of research results in departmental colloquium.
4. Passing a general examination in the candidate’s major subject.

Option II. Option II requires the following:
1. A minimum of 36 graduate credit hours in courses numbered 500 or above; between 6 and 12
hours can be in graduate research conducted with one or more faculty members involving work on a research problem that requires use of literature, laboratory or field techniques, and preparation of a report. One semester of BIOL 701 Topics in: Colloquium is required. Students may be required to take courses specified by departmental requirements or the committee at the beginning of the degree program.

2. Passing a general examination that meets the Graduate School final examination requirement.

Normally, students who do not plan to pursue graduate studies beyond the master’s level select this option.

Ph.D. Degree Requirements: Biology (Specialty), Botany, or Entomology

An applicant should have a broad background in biology, including genetics, morphology/anatomy, physiology, ecology, evolution/population biology, and systematics. Deficiencies may be corrected by course work.

Requirements. In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree include the following:

1. The equivalent of at least three academic years of full-time graduate study. Students who work as teaching or research assistants or have other obligations may need more than three years. One semester of BIOL 701 Topics in: Colloquium is required. Students may be required to take courses specified by departmental requirements or the committee at the beginning of the degree program.

2. Satisfaction of one of the following options, the specific requirements for which are determined by the student’s advisory committee:

(a) A reading knowledge of two modern foreign languages pertinent to the student’s research. A student may demonstrate a reading knowledge in two ways: satisfactory completion of a designated course in the language or an examination (as described under Research Skills, Foreign Language in the General Information chapter of this catalog). A candidate may make only three attempts to satisfy the requirement in any one language. Graduate students who are not native speakers of English must demonstrate oral and written fluency in English as one of their languages. They are encouraged to participate in the programs and testing services of the Applied English Center to meet this goal. English competence is determined by a departmental committee.

(b) Comprehensive knowledge of one modern foreign language pertinent to the student’s research. Non-native speakers of English must demonstrate oral and written fluency (reading, writing, and speaking) in English to satisfy this requirement.

(c) A reading knowledge of one foreign language plus a demonstrated proficiency in another research skill (a list of approved research skills is available from the graduate coordinator).

3. A written dissertation proposal must be presented to and accepted by the advisory committee, usually before the end of the student’s first year.

4. Successful completion of a comprehensive examination qualifying the student for candidacy for the Ph.D. The examination tests the breadth of students’ knowledge of biology and explores their ability to synthesize information and think critically. Examinations are conducted in English.

5. At least two semesters of teaching experience or other approved experience.

6. A dissertation in English based on the results of original research must be submitted to and approved by the department and the Graduate School. Dissertations may be presented in publishable form, designed for a specific scientific periodical approved by the advisory committee. The general regulations of the Graduate School concerning the preparation of the thesis or dissertation also must be met.

7. A defense of the dissertation that includes a formal oral presentation of the completed research.

Time Limits. Consult the general requirements of the Graduate School for time limits and regulations. Petitions to extend the time limits must be approved by the student’s thesis committee and forwarded to the departmental graduate committee for consideration.

A student beginning graduate studies with only a bachelor’s degree normally completes all work for the master’s degree in two or three years after initial enrollment at KU. A student beginning graduate studies with a master’s degree in the biological sciences normally completes all work for the doctoral degree within four or five years after initial enrollment at KU.

A student beginning graduate studies with only a bachelor’s degree in the biological sciences normally completes all work for the doctoral degree within five to seven years after initial enrollment at KU.

Biological Sciences: Molecular Biosciences

Chair: Paul Kelly
Haworth Hall, 1200 Sunnyside Ave., Room 2034
Lawrence, KS 66045-7534, (785) 864-3206
www.ku.edu/~mb/bcmb

Graduate Director: John C. Brown,
8041 Haworth Hall, (785) 864-5157

Professors: Brown, Buller, Dentler, Draper, Kelly, Orr, Richter, Sanders, Suprenant, Takusagawa, Weaver
Associate Professors: Benedict, Buechner, Cohen, Corbin, Egan, Floor, Gegenheimer, Kuczera, Picking, Stelter, Yamshchikov

Assistant Professors: Gamblin, Lamb, Lundquist, Neuffeld, Quackenbush, Timmons, Urbauer, Wang

The department offers master’s and Ph.D. degrees in the disciplines of biochemistry and biophysics; microbiology; and molecular, cellular, and developmental biology. A program in neurobiology also allows a research focus. Graduate students may pursue degree tracks in the disciplines of their choice but may be involved in collaborative research. New students should confer with the graduate director to plan a first-semester schedule. Until the student chooses a permanent adviser (usually by the second semester of graduate study), he or she is advised by the graduate director. Students assigned a particular faculty adviser should arrange their course schedules with that adviser.

After the first semester of graduate study and after all laboratory rotations are completed, the student selects a laboratory in which to pursue research in the degree track or program. The choice of degree path within a discipline normally is made during the first year of graduate study. Students pursue the degree under the guidance of a graduate adviser and graduate committee.

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, the minimum requirements of the Graduate...
School. 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 examination, including those with half-time assistantships, to enroll in at least 9 hours each semester and 3 hours each summer session. A student who has not yet passed the comprehensive examination and who has no stipend may reduce summer session hours, with the approval of the major professor and department chair. After passing the comprehensive 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 undertake 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 credit hour, unless otherwise recommended and approved by the student’s graduate committee, major professor, and department chair.

Research assistantships also may be available. Graduate teaching and research assistantships generally are renewable yearly. Renewals depend on the student’s performance and the availability of funds. Teaching assistants are appointed on either a semester or an academic-year basis. Teaching assistants must make arrangements with the major professor or the chair for summer appointments. Generally, research assistants are appointed for 11 or 12 months.

During the first semester, 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. The rotation program currently is not offered as a course. Students enroll in advanced study or in a similar course from the faculty member with whom they begin the rotation schedule. As soon as possible after the rotation, the student and faculty member choose a laboratory to begin research. The department’s graduate admissions committee must approve the choice.

Each graduate student must teach in the laboratory sections of formal courses for at least two semesters.

Admission
The department adheres to Graduate School minimum admission requirements. Applicants are evaluated and ranked on the basis of overall and science grade-point averages, transcripts, three recommendation letters, Graduate Record Examination scores and, when applicable, Test of English as a Foreign Language and Test of Spoken English scores.

The number of students entering the program each year is largely determined by laboratory space, financial resources, grants, and the number of students leaving the program. The department usually maintains a full enrollment.

Contact the graduate admissions officer for application materials. Applications must include (1) a completed application form; (2) two copies 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 (we require the general test and recommend the subject test in biochemistry, cell and molecular biology; biology; or chemistry); (5) Test of English as a Foreign Language scores from international students; (6) three letters of recommendation from qualified individuals; (7) a statement of aims describing the applicant’s interests and professional goals; and (8) an application fee (see page 195).

All files must be complete and received by the graduate admissions officer by January 15 each year. Applicants are informed of decisions after February 15.

Submit your application to the Graduate School online at www.grad.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

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 for each new graduate student; (3) attendance at the department seminar every semester, independent of discipline; (4) a graduate committee established by the beginning of the spring semester of the first year; (5) 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. One laboratory rotation during the first semester of graduate study and all of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 672 Gene Expression, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, BIOL 801 Topics (one required), 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. Candidates for the M.A. in microbiology must fulfill departmental major requirements for a B.A. or B.S. degree in microbiology, or the equivalent. These courses are required: One laboratory rotation during the first semester of graduate study; BIOL 701 Topics in Seminar Procedures; BIOL 904 Graduate Seminar in Microbiology (must attend and participate every semester); and at least three graduate courses 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, 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. At least two courses must be in chemistry,
biochemistry, or areas outside the department approved by the major adviser and graduate committee.

Specific M.A. Requirements: Molecular, Cellular, and Developmental Biology. One laboratory rotation during the first semester and all of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 672 Gene Expression, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, BIOL 801 Topics (one required), plus electives to satisfy the 30-hour course requirement. Electives are determined in consultation with the graduate adviser and graduate committee.

Ph.D. Degree Requirements

General Requirements for All Students. All Graduate School requirements in this catalog must be fulfilled, including the foreign language or research skills requirement. Refer to each discipline for specific course requirements. General requirements include: (1) at least three individual laboratory rotations during the first semester of graduate study, (2) attendance at the weekly departmental seminar every semester, independent of discipline, (3) a FLORS requirement (see discipline’s degree requirements), (4) a minimum of two semesters of graduate teaching, (5) a graduate committee established before the beginning of the fall semester of the second year, (6) a minimum of one annual graduate committee meeting, (7) a written preliminary examination in the form of a research proposal submitted by the end of the spring semester of the second year of graduate study, (8) 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 exam admits the student to candidacy for the Ph.D. degree), (9) a dissertation based on original research presented to the dissertation examination committee for evaluation and presented and defended in a formal public lecture, (10) seven-year time limit to complete the degree.

First-year Curriculum for All Students. The minimum number and types of first-year courses include BIOL 701 Topics in Seminar Procedures (fall semester); Laboratory Rotation (fall semester); plus one course from each of the following areas during the first academic year: (1) Biochemistry (may be fulfilled by either BIOL 658 Biochemistry I or BIOL 750 Advanced Biochemistry), (2) Cell/Developmental Biology/Immunology (may be fulfilled by either BIOL 752 Cell Biology or BIOL 811 Advanced Molecular and Cellular Immunology), (3) Genetics (may be fulfilled by either BIOL 815 Advanced Molecular Genetics or BIOL 672 Gene Expression). Specific Ph.D. Requirements: Biochemistry and Biophysics. Refer to the first-year curriculum above. Three laboratory rotations are required during the first semester. All of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 672 Gene Expression, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, BIOL 901-BIOL 904 Graduate Seminars, BIOL 918 Modern Biochemical and Biophysical Methods, and BIOL 952 Introduction to Molecular Modeling. The graduate committee may recommend that additional courses be taken. The FLORS requirement must be met by demonstrating training in a specific research technique or completing one of the following courses: BIOL 925 Research Grant Proposal Preparation, BIOL 719 Light and Electron Microscopy, BIOL 841 Biometry I, BIOL 703 Radioisotopes and Radiation Safety in Research.

Specific Ph.D. Requirements: Microbiology. Refer to the first-year curriculum above. Three laboratory rotations are required during the first semester. All of the following courses are required: BIOL 701 Topics in Seminar Procedures, 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, and BIOL 904 Graduate Seminar in Microbiology (must attend and participate every semester). The graduate committee may recommend that additional courses be taken. The FLORS requirement must be met by one of the following courses: BIOL 750 Advanced Biochemistry, CHEM 627 or higher, a course in computer science listed in this catalog under Research Skills, a course in electron microscopic methods, a course in radioisotope techniques (e.g., BIOL 702, BIOL 703), a course in tissue culture techniques (BIOL 756).

Note: Ph.D. students in microbiology must take a 2-hour written examination at the end of the first year of graduate study, usually in May. The content of the examination is general microbiology as covered in BIOL 400. A committee whose membership rotates among the microbiology section’s graduate faculty prepares the examination. The examination must be passed with an overall score of at least 65 percent before the student can progress to the doctoral qualifying (comprehensive) examination. A student who fails in a second attempt to pass the examination at the beginning of the succeeding fall semester may not continue as a Ph.D. candidate and is not eligible for a teaching assistantship after that semester.

Specific Ph.D. Requirements: Molecular, Cellular, and Developmental Biology. Refer to the first-year curriculum above. Three laboratory rotations are required during the first semester. All of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 672 Gene Expression, BIOL 690 Control Mechanisms in Development, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, and BIOL 901-BIOL 904 Graduate Seminars. The graduate committee may recommend that additional courses be taken. The FLORS requirement must be met by demonstrating training in a specific research technique or completing one of these courses: BIOL 925 Research Grant Proposal Preparation, BIOL 719 Light and Electron Microscopy, BIOL 841 Biometry I, BIOL 703 Radioisotopes and Radiation Safety in Research.

Biological Sciences Courses

Courses by Topics

Anatomy and Histology
- BIOL 510 Comparative Anatomy
- BIOL 550 Histology
- BIOL 561 Histological Technique
- BIOL 658 Developmental Plant Anatomy
- BIOL 708 External Morphology of Insects
- BIOL 716 Insect Physiology and Internal Morphology

Biochemistry
- BIOL 600 Introductory Biochemistry, Lectures
- BIOL 601 Introductory Biochemistry, Laboratory
- BIOL 658 Biochemistry I
- BIOL 659 Biochemistry Laboratory
- BIOL 665 Biochemistry II
- BIOL 672 Gene Expression
- BIOL 688 The Molecular Biology of Cancer
- BIOL 718 Laboratory in Molecular Biology
- BIOL 758 Cell and Tissue Culture Laboratory
- BIOL 768 Plant Molecular Biology
- BIOL 770 Plant Biochemistry
- BIOL 775 Chemistry of the Nervous System
- BIOL 911 Research Topics in Plant Physiology and Biochemistry
BIOL 918 Modern Biochemical and Biophysical Methods
BIOL 952 Introduction to Molecular Modeling

Botany
BIOL 555 General Plant Physiology
BIOL 602 Plant Ecology
BIOL 603 Systematic Botany
BIOL 606 Ecological Plant Physiology
BIOL 607 Field and Laboratory Exercises in Plant Ecology
BIOL 608 Developmental Plant Anatomy
BIOL 610 Plant Kingdom
BIOL 633 Medical Mycology
BIOL 732 Physiology of Fungi
BIOL 742 Plant Population Biology
BIOL 751 Plant Communities of North America
BIOL 767 The Vegetation of the Earth
BIOL 770 Plant Biochemistry
BIOL 911 Research Topics in Plant Physiology and Biochemistry
BIOL 968 Seminar in Vegetation Geography

Cell Biology
BIOL 688 The Molecular Biology of Cancer
BIOL 690 Control Mechanisms in Development
BIOL 752 Cell Biology
BIOL 756 Cell and Tissue Culture Laboratory
BIOL 930 Ultrastructure and Cellular Mechanisms

Developmental Biology
BIOL 500 Principles of Embryology
BIOL 605 Advanced Plant Physiology Laboratory
BIOL 688 The Molecular Biology of Cancer
BIOL 690 Control Mechanisms in Development
BIOL 710 Insect Development

Ecology
BIOL 525 Aquatic Entomology
BIOL 602 Plant Ecology
BIOL 606 Ecological Plant Physiology
BIOL 607 Field and Laboratory Exercises in Plant Ecology
BIOL 620 Physiological Ecology
BIOL 625 Behavioral Ecology and Sociobiology
BIOL 660 Limnology and Aquatic Ecology
BIOL 661 Stream Ecology
BIOL 662 Limnology Laboratory
BIOL 667 Chemical Communication in Sex, Feeding, and Fighting
BIOL 714 Community and Ecosystem Ecology
BIOL 742 Plant Population Biology
BIOL 751 Plant Communities of North America
BIOL 782 Principles of Biogeography
BIOL 786 Fundamentals of Tropical Biology
BIOL 944 Topics in Quantitative Ecology: ___

Entomology
BIOL 500 Biology of Insects
BIOL 505 Social Insects
BIOL 525 Aquatic Entomology
BIOL 540 General Invertebrate Zoology
BIOL 621 Medical Parasitology
BIOL 622 Paleontology

Evolution
BIOL 628 Evolution
BIOL 743 Population Genetics
BIOL 782 Principles of Biogeography
BIOL 847 Phylogenetics
BIOL 950 Evolutionary Mechanisms

Field Courses
BIOL 607 Field and Laboratory Exercises in Plant Ecology
BIOL 797 Field Course in Vertebrate Paleontology

General Biology
BIOL 505 Human Genetics
BIOL 701 Topics in: ___

Genetics
BIOL 690 Control Mechanisms in Development
BIOL 742 Plant Population Biology
BIOL 743 Population Genetics
BIOL 747 Quantitative Genetics
BIOL 872 Gene Expression II
BIOL 905 Advanced Molecular Genetics
BIOL 906 Advanced Genetics

Invertebrate Biology
BIOL 500 Biology of Insects
BIOL 505 Social Insects
BIOL 525 Aquatic Entomology
BIOL 540 General Invertebrate Zoology
BIOL 621 Medical Parasitology
BIOL 622 Paleontology

Methods
BIOL 560 Histology
BIOL 561 Histological Technique
BIOL 570 Introduction to Biostatistics
BIOL 607 Field and Laboratory Exercises in Plant Ecology
BIOL 670 Natural History Museum Techniques
BIOL 702 Laboratory Practice: Radiation Safety Procedures
BIOL 703 Radioisotopes and Radiation Safety in Research
BIOL 704 Research Animal Methods
BIOL 756 Cell and Tissue Culture Laboratory
BIOL 785 Museum Management
BIOL 798 Principles and Practices of Museum Collection Management
BIOL 799 Natural History Museum Apprenticeship
BIOL 841 Biometry I
BIOL 842 Biometry II
BIOL 888 Topics in Evolutionary Morphology: ___
BIOL 943 Multivariate Data Analysis

Microbiology
BIOL 593 Immunology
BIOL 594 Immunology Laboratory
BIOL 596 Pathogenic Microbiology
BIOL 597 Pathogenic Microbiology Laboratory
BIOL 512 General Virology
BIOL 513 Virology Laboratory
BIOL 516 Microbial Physiology
BIOL 517 Microbial Physiology Laboratory
BIOL 518 Microbial Genetics
BIOL 519 Microbial Genetics Laboratory
BIOL 699 Current Progress in Microbiology
BIOL 612 Fundamentals of Microbiology
BIOL 721 Microbial Genetics
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
BIOL 880 Advanced Study in Microbiology
BIOL 904 Graduate Seminar in Microbiology

Physiology and Animal Behavior
BIOL 555 General Plant Physiology
BIOL 556 General Plant Physiology Laboratory
BIOL 605 Advanced Plant Physiology Laboratory
BIOL 606 Ecological Plant Physiology
BIOL 620 Physiological Ecology
BIOL 646 Mammalian Physiology Laboratory
BIOL 647 Mammalian Physiology Laboratory
BIOL 652 Comparative Animal Behavior
BIOL 654 Comparative Animal Behavior, Laboratory
BIOL 716 Insect Physiology and Internal Morphology
BIOL 732 Physiology of Fungi
BIOL 733 Chemistry of the Nervous System
BIOL 776 Mammalian Neuroanatomy
BIOL 777 Integrative and Developmental Neurobiology
BIOL 778 Respiratory Physiology
BIOL 911 Research Topics in Plant Physiology and Biochemistry

Population Biology
BIOL 712 Population Biology
BIOL 742 Plant Population Biology
BIOL 743 Population Genetics

Special Topics
BIOL 701 Topics in: ___
BIOL 801 Topics in: ___
BIOL 899 Master’s Thesis
BIOL 985 Advanced Study
BIOL 999 Doctoral Dissertation

Systematics
BIOL 540 General Invertebrate Zoology
BIOL 603 Systematic Botany
BIOL 711 Insect Systematics
BIOL 746 Principles of Systematics
BIOL 782 Principles of Biogeography
BIOL 847 Phylogenetics

Vertebrate Biology
BIOL 704 Research Animal Methods
BIOL 780 Fisheries
BIOL 781 Fisheries, Laboratory
BIOL 790 Paleontology of Lower Vertebrates
BIOL 791 Paleontology of Higher Vertebrates
BIOL 792 Ichthyology
BIOL 793 Ornithology
BIOL 794 Mammalogy
BIOL 795 Biology of Amphibians
BIOL 796 Biology of Reptiles
BIOL 797 Field Course in Vertebrate Paleontology

THE UNIVERSITY OF KANSAS  •  2003-05 GRADUATE SCHOOL CATALOG
Biological Sciences Courses

- BIOL 500 Biology of Insects (3).
- BIOL 502 Biology of Insects, Laboratory (1).
- 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 (2).
- BIOL 510 Comparative Anatomy (3).
- BIOL 511 Biology of Spiders Laboratory (1).
- BIOL 512 General Virology (3).
- BIOL 513 Virology Laboratory (2).
- 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 (5).
- BIOL 550 Introduction to Systematics (3).
- BIOL 555 General Plant Physiology (3).
- BIOL 556 General Plant Physiology Laboratory (2).
- BIOL 560 Histology (3).
- BIOL 561 Histological Technique (2).
- BIOL 568 Potential Ecological Effects of Nuclear War (2).
- BIOL 570 Introduction to Biostatistics (3).
- BIOL 571 Introduction to Biostatistics Laboratory (1).
- BIOL 573 Animal Ecology (3).
- BIOL 574 Animal Ecology Laboratory (2).
- BIOL 576 Introduction to Aquatic Ecology (2).
- BIOL 583 Animal Behavior (3).
- BIOL 590 Principles of Embryology (3).
- BIOL 592 Ichthyology (4).
- BIOL 595 Human Genetics (3).
- BIOL 600 Introductory Biochemistry, Lectures (4).
- BIOL 601 Introductory Biochemistry, Laboratory (2).
- BIOL 602 Plant Ecology (3).
- BIOL 603 Systematic Botany (3).
- BIOL 605 Advanced Plant Physiology Laboratory (2).
- 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) NB.
- BIOL 613 Biology of Honeybees (3).
- BIOL 616 Medical Entomology (3).
- BIOL 620 Physiological Ecology (3).
- BIOL 621 Medical Parasitology (3).
- BIOL 622 Paleontology (3).
- BIOL 623 Paleontology Laboratory (1).
- BIOL 625 Behavioral Ecology and Sociobiology (3).
- BIOL 628 Evolution (3).
- BIOL 630 Conservation and Wildlife Biology (3).
- BIOL 635 Medical Mycology (4).
- BIOL 640 The Biology and Evolution of Fossil Plants (3).
- BIOL 641 Laboratory in Paleobotany (1).
- BIOL 644 Comparative Animal Physiology (3).
- BIOL 646 Mammalian Physiology (4).
- BIOL 647 Mammalian Physiology Laboratory (2).
- BIOL 652 Comparative Animal Behavior (3).
- BIOL 654 Comparative Animal Behavior, Laboratory (1).
- BIOL 656 Ecosystem Ecology (3).
- BIOL 658 Biochemistry I (3).
- BIOL 659 Biochemistry Laboratory (3).
- BIOL 660 Limnology and Aquatic Ecology (3).
- BIOL 661 Stream Ecology (3).
- BIOL 662 Limnology Laboratory (1).
- BIOL 665 Biochemistry II (3).
- BIOL 667 Chemical Communication in Sex, Feeding, and Fighting (3).
- BIOL 668 Evolutionary Ecology (3).
- BIOL 669 Biology of Freshwater Invertebrates (3).
- BIOL 670 Natural History Museum Techniques (2-5).
- BIOL 671 Stream Ecology Laboratory (2).
- BIOL 672 Gene Expression (3).
- BIOL 673 Cellular and Molecular Neurobiology (3).
- BIOL 688 The Molecular Biology of Cancer (3).
- BIOL 690 Control Mechanisms in Development (3).
- BIOL 692 Developmental Genetics (3).
- BIOL 695 Animal Communication and Sensory Ecology (3).
- BIOL 699 Divisional Honors Research Colloquium (1).
- BIOL 700 Conservation Principles and Practices (3).

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.
ings from current scientific literature. Prerequisite: Intended for graduate students in biology who did not have an undergraduate course in population biology, consent of instructor. LEC.

BIOL 714 Community and Ecosystem Ecology (3). Study of factors determining distribution of organisms, community structures, energy flow in ecosystems, and functional analysis of ecosystems. Discussion periods will include reading from current scientific literature. Prerequisite: Intended for graduate students in biology who did not have an undergraduate course in community ecology. Consent of instructor. LEC.

BIOL 716 Insect Physiology and Internal Morphology (3). Emphasizing the interdependence of structure and function, the course deals with the mechanisms and integration of the internal life-supporting systems of insects. Prerequisite: BIOL 502 and BIOL 600 or consent of instructor. LEC.

BIOL 717 Insect Ecology and Behavior (3). Lectures and laboratory demonstrations. A study of insect population dynamics, life history strategies, co-evolutionary interactions, foraging, and reproductive and social behaviors. Approaches from basic population biology and behavioral ecology are emphasized. Prerequisite: A course in ecology or behavior, or consent of instructor. LEC.

BIOL 718 Laboratory in Molecular Biology (3). Practical experience in recombinant DNA technology and molecular cloning. Given concurrent with BIOL 418. Prerequisite: BIOL 416 or course in biochemistry or microbiology. Training in a radiation safety preferred. LAB.

BIOL 719 Light and Electron Microscopy (3). A lecture and laboratory class emphasizing the theoretical and practical use of light microscopes and scanning and transmission electron microscopes. A variety of approaches using light microscope will be employed, including bright field, phase, fluorescence, DIC, polarization, and darkfield optics. A variety of techniques will be used to prepare specimens and view them using scanning and transmission electron microscopy. Video and computer-aided analysis of images as well as conventional photographic techniques will be included. Prerequisite: Permission of instructor. LEC.

BIOL 720 Scientific Illustration (5). Lectures, demonstrations, and studio participation. Instruction in the preparation of illustrations for scientific publications, theses, and oral and poster presentations. Emphasis on basic drafting and layout skills, and pen and ink and tone renderings intended for publication. Attention given to preparation of photographs for publication and oral presentations. Instruction provided in use of specialized optical equipment for drawing. Prerequisite: Upper division or graduate standing and permission of instructor. LEC.

BIOL 721 Microbial Genetics (3). Bacteria and viruses as models of genetic systems. Mutagenesis and repair. Transformation, transductions, and recombination. Molecular biology of gene expression. This course is the graduate-level section of BIOL 518 and MCRB 510. Graduate students will be assigned additional and more advanced studies. Prerequisite: An introductory microbiology course or permission of instructor. LEC.

BIOL 728 Radiation Biology (3). Discussion of the basic physical and chemical principles involved in the mode of action of ionizing radiations (and ultraviolet light), including the steps leading from ionization to the production of biological damage; the different types of lesions that radiations induce from the molecular level to the organismal level and chemical and biological modifications as a function of the exposure. Discussion of radiation tolerance of populations and genetic and carcinogenic risk from radiation and chemical agents. Prerequisite: Either BIOL 416 or BIOL 6 00, or BIOL 726. LEC.

BIOL 732 Physiology of Fungi (3). A study of the nutritional and physiological requirements for growth and reproduction in the fungi with emphasis on their use in biological research. Techniques for measuring physiological responses, running bioassays, and inducing and identifying mutants. Lectures and laboratory. Prerequisite: Eight hours of biological sciences and a course in organic chemistry. LEC.

BIOL 742 Plant Population Biology (3). A survey of the major areas of plant population ecology and genetics including competition, demography, pollination ecology, gene flow, natural selection and mating systems. Each topic is introduced by a lecture and is further explored by discussion of the current literature. Prerequisite: BIOL 412 or equivalent. LEC.

BIOL 743 Population Genetics (3). Description and discussion of genetic variation in natural populations. The effects and interaction of selection, migration, mutation, mating systems, and finite population size on the maintenance of genetic variation. Discussion of the interface with evolution and population ecology. Prerequisite: BIOL 404 and BIOL 412 or equivalent. LEC.

BIOL 745 Laboratory in Experimental Ecology (3). A series of seven laboratory modules emphasizing quantitative methods and experimental analysis. Each module requires data collection analysis, and written interpretation. Mathematical instrumentation, including use of microcomputers, is emphasized. Topics include ecological modeling, ecological genetics, physiological ecology, community structure, mating and reproduction and precipitation and soil chemistry. Prerequisite: BIOL 412 or BIOL 414. LAB.

BIOL 746 Principles of Systematics (4). Lectures: historical and philosophical foundations of modern systematics; theory and practice of classifications; character analysis; phylogeny reconstruction; formulation and testing of systematic hypotheses; species concepts and speciation; the interface between systematic theory, particularly the origins of asymmetric diversity patterns, macroevolution, adaptation, coevolution, and the evolution of higher taxa; roles of palaeontological, ontogenetic, biochemical, and molecular data in systematics, and biogeography. Laboratory work: practical application of classification nomenclature, development of keys, descriptions and systematic revisions, character analysis, phylogeny reconstruction, hypothesis testing, interpretation of biogeographic patterns. (Three hours lecture and two hours laboratory per week.) Prerequisite: BIOL 628 or equivalent. In- tended for graduate students planning to specialize in systematics. LEC.

BIOL 747 Quantitative Genetics (3). A discussion of genetic traits for which individual gene differences do not separate a population into qualitatively distinct groups. Includes the estimation of heritability, genetic determination, and number of loci, and a study of selection theory. Prerequisite: BIOL 404 or BIOL 412 or equivalent and a course in statistics. LEC.

BIOL 749 Topics in Stable Isotopes in the Natural Sciences (1-3). 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 GEOG 749.) LEC.

BIOL 750 Advanced Biochemistry (3). The structures and dynamics of proteins and nucleic acids will be developed in terms of well-understood examples which will also be used to discuss the major classes of proteins. The application of structural and dynamical principles to biological membranes and their function will also be discussed. Prerequisite: A general biochemistry course. LEC.

BIOL 751 Plant Communities of North America (3). Phylogenetic and floristic analysis of the vegetation, with emphasis on the South- west; distribution of communities in relation to climate, substratum, and disturbance; recognition of dominant elements of vegetation through study of specimens and illustrative material. Prerequisite: BIOL 602. LEC.

BIOL 752 Cell Biology (3). A lecture course emphasizing biochemical developmental, and molecular aspects of cell structure and function. Prerequisite: Completion of a graduate level course in biochemistry or permission of instructor. LEC.

BIOL 754 Brain Diseases and Neurological Disorders (3). Major brain diseases and neurological disorders such as stroke, Alzheimer’s Disease, Parkinson’s disease, Huntington’s Disease, Multiple Sclerosis, Epilepsy, Schizophrenia, etc., will be discussed in terms of the etiology, molecular, and cellular basis of potential therapeutic interventions. Graduate students are required to present original research papers assigned by the instructor to the class in addition to the other assignments for all the students enrolled. Prerequisite: BIOL 150, or consent of instructor. LEC.

BIOL 756 Cell and Tissue Culture Laboratory (3). An introduction to current laboratory methods of cell and tissue culture, including cell culture 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 GEOG 749.) LEC.

BIOL 757 The Vegetation of the Earth (3). A discussion of the world’s vegetation in its natural condition and as affected by man. Included are aspects of its economic and cultural usefulness and the problem of its preservation. Prerequisite: BIOL 634. LEC.

BIOL 768 Plant Molecular Biology (3). Gene expression in chloroplasts, mitochondria, and plant nuclei, and regulatory interactions among these genomes. Special topics include the molecular biology of the photosynthetic apparatus, nitrogen fixation, stress and development, viruses and viroids, transposable genetic elements and gene evolution, and gene transfer and plant genetic engineering. Prerequisite: A course in biochemistry, cell or molecular biology, or permission of instructor. LEC.

BIOL 770 Plant Biochemistry (3). A detailed study of plant biochemistry with emphasis on metabolic and regulatory processes particularly characteristic or unique in plants. Prerequisite: BIOL 600 or equivalent. LEC.

BIOL 772 Gene Expression (3). A study of the structure and expression of genes in prokaryotes and eukaryotes. Emphasis on the mechanisms of DNA, RNA, and protein biosynthesis. This course is currently with BIOL 672 and is open to graduate students seeking a more rigorous treatment of techniques in molecular biology that students receive in BIOL 672. Prerequisite: A course in biochemistry or consent of instructor. LEC.

BIOL 775 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with spe-
### Biological Sciences Courses

- **BIOL 775 Mammalian Neuraneatomy (3).** Lectures, video tape demonstrations, and laboratory dissection of mammalian nervous system with some attention to human material. For pre-health science majors with major emphasis on structure as it relates to function. Prerequisite or Corequisite: A course in neurobiology (BIOL 435, BIOL 777), or permission of the instructor. LAB
- **BIOL 777 Integrative and Developmental Neurobiology (3).** Cellular processing of neural information both at the local level and in long distance integration. Local computing functions, and integration of nerve functions among the various areas to produce coherent 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 invertebrate and vertebrate animals will be presented, as will determinants of brain sexual dimorphism. Prerequisite: An upper level course in physiology or BIOL 520. LEC
- **BIOL 778 Respiratory Physiology (3).** Structure, function, and regulation of respiratory systems of birds and mammals. Lectures will discuss the mechanics of respiration, chemical and neural control of breathing, pulmonary blood flow and transport of oxygen and carbon dioxide in the blood. The response of the respiratory system to stress, physical exercise, hypoxia, and pulmonary disease will also be discussed. (Same as HSES 778) Prerequisite: BIOL 724 or BIOL 726 or HSES 710. 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 appraisal and management of stocks. Historical and prospective roles 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 current biogeographic patterns; lectures and laboratory exercises. 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 current areas of active research in herpetology. Topics will be considered within a phylogenetic framework, and include discussion on systematics, biogeography, tetrapod origins, skeletal systems, and related topics will be presented for museums of art, history, natural history, and anthropology. (Same as AMS 730, ANTH 798, GEOL 785, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
- **BIOL 784 Introduction to Museum Education (3).** Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding opportunities. Workshop designed for those involved in developing and implementing museum education programs. (Same as AMS 797, ANTH 797, GEOL 784, HIST 721, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous 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, ANTH 796, 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 (3-6).** The tropical environment and biota; ecology and evolution of biota in the tropics. Primarily a field course, taught 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 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 program in both large and small museums in the major disciplines. (Same as AMS 700, ANTH 797, GEOL 781, HIST 723, 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 characteristics and potential as research, education, and cultural resource institutions responsible for collections of natural and cultural objects. (Same as AMS 720, ANTH 795, 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 osteology, geological distribution, and evolution of the principal groups of fishes, amphibians, reptiles, and birds. Lectures and laboratory. (Same as GEOL 725.) LEC
- **BIOL 791 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 GEOL 726.) LEC
- **BIOL 792 Ichthyology (4).** A study of fishes. Lectures topics include the structure and function of fishes; the adaptations of fishes to the aquatic environment; and a survey of major fish groups with emphasis on evolutionary relationships and biogeography. Laboratory topics include a survey of fishes using specimens, and the use of keys to identify fishes with emphasis on the Kansas fish fauna. A research paper using primary and laboratory. Prerequisite: Graduate standing or permission of the instructor. LEC
- **BIOL 793 Ornithology (3).** A study of birds; recognition of species; field and laboratory observations; behavior, phylogeny, and speciation. Prerequisite: BIOL 413. LEC
- **BIOL 794 Mammalogy (3).** A study of mammals, with emphasis on systematics, biogeography, and natural history. Lectures, laboratory, and field study. Prerequisite: BIOL 100 or Biol 413. LEC
- **BIOL 795 Biology of Amphibians (3).** Evolutionary biology of amphibians with emphasis on systematics, morphology, development, reproductive strategies, and distribution; lectures and laboratory. Prerequisite: BIOL 664 or permission of instructor. LEC
- **BIOL 796 Biology of Reptiles (3).** Evolutionary biology of reptiles with emphasis on systematics, morphology, reproductive strategies, and distribution; 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 sediments, and interpretation of the adequacy and bias of samples. 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 the use in scholarship and 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, ANTH 798, GEOL 785, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
- **BIOL 799 Natural History Museum Apprenticeship (1-6).** Provides directed, practical experience in collection care and management, public education, exhibits and administration with emphases to suit the particular requirements of each student. Full time for one semester or half time for two semesters. (Same as AMS 799, ANTH 799, GEOL 725, HIST 799, and MUSE 799.) Prerequisite: None. Prerequisite: None. Same as AMS 799. FLD
- **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 (2).** Discusses aspects of graduate education that are directed at the post-Ph.D. phases of a career, but that must be initiated early in the graduate student program of study. One 2-hour discussion per week. LEC
- **BIOL 806 Major Patterns in Insect Evolution (3).** Extensive reading and discussion of the primary literature on topics relating to major patterns in 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 species diversity. Assigned readings require a solid background in evolutionary theory and insect biology, especially morphology, development, and classification. Prerequisite: Permission of instructor. LEC
- **BIOL 810 Seminar in Biochemistry (1).** Presentation and discussion of specific areas of recent research in biochemistry. This course may be taken more than once. LEC
- **BIOL 811 Advanced Molecular and Cellular Immunology (3).** Covers recent advances in immunocytochemistry and immunobiology. Topics include structure and function of antibodies, hybridoma systems, idiotypes, induction and regulation of the immune response through cell interactions and cytokine action, and the role of immune activity in disease states. May be taken as research, education, or public service.LEC

---

**The University of Kansas has a mission to serve the international dimensions of higher education.**

**The Kansas Ecological Reserves, KU’s biological field station, has about 1,800 acres of tallgrass prairie, oldfield, wetland, forest, successional woods, and land under agricultural management.**
BIOL 912 Mechanisms of Host-Parasite Relationships (3). Lectures. Emphasis is on virulence factors of microorganisms and the host response to infection. Topics will include pathogenesis of intracellular and extracellular parasites, bacterial adhesins, and toxins, and the role of innate and acquired immunity in host resistance and the response to infection. Prerequisite: A course in microbiology, or consent of instructor. LEC

BIOL 913 Advanced Bacterial Physiology (3). Lectures. The intermediary reactions catalyzed by the bacterial cell during energy-requiring processes. Thermodynamic considerations of these processes are discussed. Knowledge of calculus is recommended. Prerequisite: Ten hours of microbiology and one year of organic chemistry. LEC

BIOL 814 Advanced Molecular Virology (3). The course concentrates on evaluation of current literature concerning all aspects of molecular biology, biochemical characterization, and pathogenic mechanisms involved in host-virus interactions. Students will be expected to present articles and participate in discussions. Prerequisite: A course in microbial genetics and a course in virology, or consent of instructor. LEC

BIOL 815 Advanced Molecular Genetics (3). A literature based course that covers recent advances in microbial genetics and molecular biology. Topics include transcription, translation, mutagenesis and repair, genetic exchange mechanisms, regulation of gene expression, and recombinant DNA techniques. Prerequisite: A course in microbial genetics, usually BIOL 484 Biometry I (3). The application of statistical methods to data from various fields of biological research. Special emphasis is placed on practical computational procedures. Prerequisite: College algebra. LEC

BIOL 842 Biometry II (3). This course is primarily devoted to special advanced topics in analysis of variance, analysis of covariance, regression analysis. Polynomial regression and multiple linear regression will be presented as will the general linear model. Elementary matrix algebra will be developed as needed. Prerequisite: BIOL 841. LEC

BIOL 847 Phylogenetics (3). An introduction to the theory and practice of phylogenetic systematics. Includes principles of character analysis including determination of homology and 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 phylogenetic system. Other topics, such as the nature of species and principles of biogeography are included. Prerequisite: Twenty hours natural history. 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 (3). Presentation and discussion by graduate students and faculty of selected topics centering on observed changes in structure and function of organisms from a phylogenetic point of view. Presentation will include results of original research when possible and appropriate, and otherwise, will be based on syntheses of recent literature. RSH

BIOL 890 Advanced Study in Microbiology (1-10). Original investigation by students at the master's degree level. Prerequisite: Ten or more hours of microbiology and consent of department. RSH

BIOL 895 Human Genetics (3). A lecture course providing balanced coverage of Mendelian and molecular genetics of humans; 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. RSH

BIOL 901 Graduate Seminar in Biochemistry and Biophysics (1). Advanced course examining current research topics in biochemistry and biophysics. 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 902 Graduate Seminar in Molecular, Cellular, and Developmental Biology (1). Advanced course examining current research topics in molecular, cellular, and developmental biology. 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 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 Graduate Seminar in Microbiology (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. RSH

BIOL 905 Advanced Molecular Genetics (1-3). A review of current literature in molecular genetics. RSH

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. RSH

BIOL 911 Research Topics in Plant Physiology and Biochemistry (1-6). Directed research on selected topics. Prerequisite: BIOL 770 or equivalent. RSH

BIOL 918 Modern Biochemical and Biophysical Methods (4). This course emphasizes the use of techniques for solving problems of structure and function of biological macromolecules. Students will complete several modules that consist of lectures relating to theory and practical aspects of each methodological approach, and apply these techniques to solving a specific problem. Students will submit a paper describing the resulting data and conclusions. Enrollment by permission of instructor only. LEC

BIOL 925 Research Grant Proposal Preparation (3). Formats, strategies, and styles of research grant proposal writing. Prerequisite: Completion of three semesters of the biochemistry or genetics program curriculum, and/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 structure as related to cell function. Prerequisite: BIOL 416, 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 Correlation Analysis. Prerequisite: BIOL 842 or knowledge of advanced matrix algebra. LEC

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 922) Prerequisite: Graduate standing or consent of instructor. LEC

BIOL 958 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. RSH

BIOL 999 Doctoral Dissertation (1-12). Original research that is to be incorporated into a Ph.D. dissertation. RSH

Environmental Sciences 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 562 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 Environmental Impact Assessment (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).

The following courses are cross-referenced as available to or recommended for students in Environmental Studies:

ANTH 695 Cultural Ecology

BIOL 570 Introduction to Biostatistics

CHEM 622 Fundamentals of Organic Chemistry

CHEM 624 Organic Chemistry I

CHEM 625 Organic Chemistry I Laboratory

ECON 520 Microeconomics

GEOG 335 Introduction to Soil Geography

GEOG 558 Intermediate Geographic Information Systems

GEOG 670 Cultural Ecology

POLS 616 Interest Group Politics

POL S 622 Government and the Economy

UBPL 538 Introduction to Environmental Planning
Chemistry

See Biological Sciences: Ecology and Evolutionary Biology.

Chemistry
Chair: Craig E. Lunte, clunte@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 1040
Lawrence, KS 66045-7582, (785) 864-4673
www.chem.ku.edu

Associate Chair, Graduate Programs: Brian B. Laird, blaird@ku.edu, 6046 Malott Hall, (785) 864-6432

Professors: Borovik, Bowman-James, Busch, Carlson, Chu, Givens, Heppert, Hierl, Lunte, Wilson

Professors Emeriti: Adams, Burgstahler, Everett, Gilles, Harmon, Huysner, Iwamoto, Kleinberg, Kuwana, Larive, Reynolds, K.B. Schowen, R. Schowen

Associate Professors: Benson, Dunn, Hanson, Johnson, Kuczer, Laird

Assistant Professors: Babirin, Berrie, Desaire, Malinakova, Robinson, Thompson, Tunger

The department’s graduate program, its Ph.D. program in particular, is aimed at producing graduates with the basic knowledge, skills, and experimental training necessary to move them into productive careers in academic, industrial, and governmental positions. The department’s 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. At the same time, the department recognizes its “central science” role by maintaining strong research and Ph.D. programs in areas that interface closely with molecular biosciences, physics, mathematics, and computer science, for example, in theoretical chemistry, 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 will be marketable commodities.

The department’s M.S. program is a traditional companion to the Ph.D. program and shares the same basic goals and programmatic flavor. It is available to and encouraged for students who prefer a course program with less depth and a research (thesis) project that is manageable in two to four semesters. Although the majority of entering graduate students choose the Ph.D. track, which is the most desirable degree for those who wish to work as independent scientists in academic, industrial, or institutional settings, the M.S. continues to serve a useful and essential role for students with other ambitions.

Research support facilities include the Biochemical Research Service Laboratory, the Instrumentation Design Laboratory, the Mass Spectrometry Laboratory, the Molecular Graphics and Modeling Laboratory, the Nuclear Magnetic Resonance Laboratory, the X-ray Crystallographic Laboratory, and the 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 complete an undergraduate program of two semesters of general chemistry with laboratories, two semesters of organic chemistry with laboratory, one semester of analytical chemistry, and two semesters of physical chemistry or the equivalent.

Application. To apply for admission, students must submit a completed Graduate School application form, two transcripts, Graduate Record Examination scores, and three recommendations for the program from individuals familiar with the applicant’s academic background and abilities. International applicants must supply a score from the TOEFL examination and Test of Spoken English. Applications must be received by April 15 to be considered for fall.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 above 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 the general admission requirements of the Graduate School. There must also be a favorable evaluation of the other application materials submitted.

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 selected from outside the department cannot be from more than two departments.
At the time of the completion of the thesis, the 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. One of the following foreign language or research skills must be completed: demonstration of a reading knowledge in the student’s area of chemistry in:
   - (a) German
   - (b) French
   - (c) Russian
   - (d) Japanese
   or demonstration to an interdepartmental committee approved by the department of the student’s ability to use effectively
   - (e) Computer science
   - (f) Electronic techniques
   - (g) Library bibliography

   Additional skills or languages can be substituted upon approval of the graduate affairs committee of the department.

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 after entering graduate school (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 wide range of topics within 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 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 635 Instrumental Methods of Analysis (2).
- CHEM 636 Instrumental Methods of Analysis Laboratory (2).
- CHEM 640 Biological Physical Chemistry (3).
- CHEM 646 Introduction to Physical Chemistry (4).
- CHEM 647 Physical Chemistry I Laboratory (2).
- CHEM 648 Molecular Physical Chemistry (3).
- 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 596 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 instruments; electronic principles; digital and analog systems in scientific instrumentation; signal conversion and optimization techniques. Prerequisite: CHEM 516 or the equivalent, one year of physics; limited enrollment, see instructor. LEC
- CHEM 716 Practicum in Facilitating Learning in the Chemistry Laboratory (1). The course provides discussions of the diverse group of undergraduates, the laboratory curriculum, and laboratory teaching strategies. 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: Permission of instructor. LAB
- 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. 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 731 Fundamentals and Methods of Analytical Chemistry (3).
- CHEM 636 Instrumental Methods of Analysis Laboratory (2).
- CHEM 648 Molecular Physical Chemistry (3).
- CHEM 737 Coordination and Organometallic Chemistry (3). An examination of the basic foundations of coordination chemistry and organometallic chemistry including symmetry methods, bonding, magnetism, and reaction mechanisms. Prerequisite: Two semesters of organic chemistry and one semester of physical chemistry in which quantum chemistry is introduced. The latter course may be taken concurrently with CHEM 737. LEC
- CHEM 740 Principles of Organic Reactions (3). A consideration of the structural features and driving forces that control the course of chemical reactions. Topics will include acid and base properties of functional groups; qualitative aspects of strain, steric, inductive, resonance, and solvent effects on reactivity; stereochemistry and conformations; an introduction to orbital symmetry control; basic thermodynamic and kinetic concepts; and an overview of some important classes of mechanisms. Prerequisite: Two semesters of undergraduate organic and one semester of physical chemistry or concurrent enrollment. LEC
- CHEM 742 Physical Organic Chemistry I (3). 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, carbenes, radicals, excited states, and strained molecules. Prerequisite: CHEM 740. LEC

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Chemistry

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 Thermodynamics and Kinetics (3). A study of the basic principles of classical thermodynamics and chemical kinetics. Topics include: the laws of thermodynamics and their application to chemical systems, methods for the determination of enthalpy, entropy and free energy changes in selected systems, kinetic analysis of simple and complex reactions, determination of reaction mechanisms, and theories of chemical reaction rates. Prerequisite: Two semesters of physical chemistry. 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 for elucidating the structure of organic molecules. A lecture 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 methods of organic and inorganic synthesis. Prerequisite: CHEM 627. LAB

CHEM 775 Chemistry of the Nervous System (3). 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 is included. (Same as BIOL 775, MDCM 775, and P&TX 775.) Prerequisite: One year of undergraduate organic chemistry. LEC

CHEM 801 Analytical Chemistry Colloquium (1). Review of important aspects of analytical chemistry not covered in the regular graduate courses. LEC

CHEM 803 Chemical Education Colloquium (1). Colloquia in various topics of current interest are presented by students, faculty, and visiting scholars. LEC

CHEM 807 Inorganic Chemistry Colloquium (0-1). Review of important aspects of inorganic chemistry not covered in the regular courses. LEC

CHEM 810 Physical Chemistry Colloquium (1). Colloquia on various topics of current interest are presented by students, faculty, and visiting scientists. LEC

CHEM 811 Organic Chemistry Colloquium (1). Credit on presentation of colloquium. LEC

CHEM 812 Chemical Seminar (1-2). Individual studies of certain advanced phases of chemistry not covered in the regular graduate courses. RSH

CHEM 899 Master's Thesis (1-10). Research work (either experimental or theoretical) in chemistry for students working toward the M.S. degree. RSH

CHEM 901 Advanced Analytical Chemistry Colloquium (1). Review of important aspects of analytical chemistry not covered in the regular graduate courses. Open to advanced graduate students. LEC

CHEM 902 Inorganic Preparations (2-4). A laboratory course covering a variety of advanced preparative techniques used in inorganic chemistry. Prerequisites: CHEM 731 and CHEM 750. LEC

CHEM 903 Electrical Methods of Analysis (2). An advanced treatment of selected electroanalytical techniques and methodology. The theory is augmented by applied laboratory work. Prerequisite: CHEM 731 or its equivalent. LEC

CHEM 904 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 905 Advanced Inorganic Chemistry Colloquium (1). Review of important aspects of inorganic chemistry not covered in regular courses. Open to advanced graduate students. 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 (5). Lecture and laboratory course; general concepts of encoding chemical information as electromagnetic radiation; major instrumental systems for decoding, interpretation, and presentation of the radiation signals; atomic emission, absorption, and fluorescence; ultraviolet, visible, infrared, and microwave absorption; molecular luminescence; scattering methods; mass spectrometry; magnetic resonance; automated spectrometric systems. Prerequisite: CHEM 750. LEC

CHEM 909 Statistical Thermodynamics (3). Advanced classical thermodynamics and introduction to equilibrium statistical mechanics with emphasis on problems of chemical interest. Topics include: the mathematical foundations of thermodynamics, fluctuations and irreversible thermodynamics, partition functions, ensemble distribution functions, chemical equilibrium, and statistical mechanics. Prerequisite: CHEM 750 and CHEM 752 or equivalent. 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 Seminar (1). Individual studies of 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 reactivity. Prerequisite: CHEM 752 or its equivalent. LEC

CHEM 914 Computational Methods in Physical Sciences (3). Advanced computer applications in physical science. General discussion and illustration of 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 a computer program to solve a physical problem. (Same as ASTR 815 and PHYS 815.) 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

CHEM 915 Intermediate Quantum Mechanics (3). The mathematical and physical principles of quantum chemistry, including vector spaces, operators and operator algebra, matrix theory, 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, vibration-rotation, Raman, electronic and Mossbauer spectroscopy. Prerequisite: CHEM 730 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 developments of quantum chemistry, including subjects such as ab initio atomic and molecular structure calculations, quantum scattering theories, quantum optics, Lie group theoretical methods, and advanced numerical methods for solving the time-dependent Schrodinger equation. Prerequisite: CHEM 915 or its equivalent. LEC

CHEM 919 Advanced Topics in Physical Chemistry: _____ (1-3). A discussion of special topics such as group theory, chemical bonding theory, electromagnetic radiation, 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 959 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: CHEM 763. 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: chemistry of carbonyl compounds, 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: _____ (2-4). 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

KU’s child language program is the only one in the nation to offer a Ph.D.
nouncement 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 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 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 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. RSH

Child Language

Director: Mabel L. Rice. mabel@ku.edu
Dole Center, 1000 Sunnyside Ave., Room 3031 Lawrence, KS 66045-7555, (785) 864-4570
www.clp.ku.edu

Graduate Adviser: Susan J. Kemper, skemper@ku.edu, 3088D Dole Center, (785) 864-0748

Participating Faculty Members: Atchley (Psychology), Barlow (Speech-Language-Hearing; Sciences and Disorders), Brady (Institute for Life Span Studies), Catts (Speech-Language-Hearing; Sciences and Disorders), Colombo (Psychology), Fey (Hearing and Speech), Greenhout (Psychology), Jongman (Linguistics), Kemper (Psychology), Loeb (Speech-Language-Hearing; Sciences and Disorders), McCluskey-Fawcett (Psychology), Pye (Linguistics), Rice (Speech-Language-Hearing; Sciences and Disorders), Rosen (Linguistics), Sereno (Linguistics), Simpson (Psychology), Storkel (Speech-Language-Hearing; Sciences and Disorders), Vitevitch (Psychology), Warren (Institute for Life Span Studies), Wilcox (Speech-Language-Hearing; Sciences and Disorders), Yamamoto (Linguistics, Anthropology)

Professors Emeriti: Hart (Bureau of Child Research, Institute for Life Span Studies), Schiefelbusch (Speech-Language-Hearing; Sciences and Disorders)

The graduate program in child language offers the first specialization degree in this new area of study. The program crosses traditional academic boundaries to give students the theoretical, empirical, and methodological competence necessary to study basic and applied issues in language acquisition. This multidisciplinary program is a cooperative endeavor of faculty members from the Departments of Human Development and Family Life, Linguistics, Psychology, and Speech-Language-Hearing; Sciences and Disorders.

Students study four areas: (1) core theoretical and experimental work on language acquisition, (2) relevant methods and theories in linguistics and psycholinguistics, (3) theoretical perspectives on developmental psychology, and (4) the nature of disordered language development and methods and techniques for language intervention. Each student is advised by a support committee of three faculty members. Enrollment in a thesis in language acquisition is required of all students in addition to participation in research activities. Opportunities for individual research projects include the projects of participating faculty members and the research teams of the Schiefelbusch Institute for Life Span Studies, the Speech-Language-Hearing Clinic, and the clinical/research facilities of the KU Medical Center.

Graduates are candidates for teaching and research positions, clinical positions providing service to communicatively disabled persons, and research work in business and governmental sectors.

The child language doctoral program reports to the College of Liberal Arts and Sciences in collaboration with participating departments. The 21-member faculty is drawn from the participating departments. The Institute for Life Span Studies provides additional instructional, research, and clinical experiences.

Admission

Students must submit three letters of recommendation, two copies of all undergraduate and graduate transcripts, and scores from 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 who have 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 to the Graduate School online at www.graduated.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Degree Requirements
For the Ph.D. degree, the student must complete all requirements of the Graduate School and the College of Liberal Arts and Sciences. 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 2104
Lawrence, KS 66045-7590, (785) 864-2396
www.ku.edu/~classics
Graduate Adviser: Anthony Corbell,
2100 Wescoe Hall, (785) 864-2393
Professors: Lombardo, Younger
Professors Emeriti: Banks, Lind, Phillips, Rosen
Associate Professors: Corbeill, Gordon, Shaw
Assistant Professors: Rehak, Welch
Assistant Professor Emerita: Price

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. Candidates for graduate teaching assistantships in Latin or Greek must have 15 junior/senior hours in Latin and/or Greek. Well-qualified candidates with fewer hours in ancient languages will be 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 to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 on 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 will be 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 the first year 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 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 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 384 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.
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). RSH

● 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
LAT 790 Practicum in the Teaching of Latin (0.5). Required of all assistant instructors and teaching assistants in the teaching of Latin. May be repeated up to three semester hours credit in total. FLD
LAT 791 Seminar in the Teaching of Latin (3). An introduction to teaching required of all assistant instructors and teaching assistants. Topics to include: pronunciation, etymology, Latin style, testing methods, and the selecting of texts. LEC
LAT 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 Latin or equivalent. RSH
LAT 899 Thesis (1-4). RSH

Clinical Child Psychology
Director: Michael C. Roberts
Dole Center, 1000 Sunnyside Ave., Room 2010
Lawrence, KS 66045-7555, (785) 864-4226
www.ku.edu/~clchild

Core Faculty: Jackson, Roberts, Steele, Vernberg, and Faculty of the Departments of Psychology and of Human Development and Family Life (see department listings)
The Clinical Child Psychology Training Program leading to the doctoral degree is affiliated with the Departments of Psychology and of Human Development and Family Life. It is accredited by the American Psychological Association in recognition of the broad and general traditions of clinical psychology with an emphasis on children. It uses the resources of both departments and includes a core faculty with specialty interests in clinical child and pediatric psychology.

The goal of doctoral training is to develop scientist-practitioners capable of conducting research and interventions for a variety of human problems, particularly those involving children and families. Such work involves understanding, prevention, and treatment of mental health and physical health problems from a psychological perspective. The training program emphasizes the acquisition of general knowledge and skills in the behavioral, social, cognitive, and biological bases of psychology, and a thorough knowledge of research methodology and statistical analyses. A particular strength is the developmental perspective presented through many aspects of training. In clinical training, students take courses in assessment and intervention, child psychopathology, behavioral and family therapy, and ethical/legal issues. Special consideration is given to ethnic and cultural diversity issues, prevention, public sector and social interventions, and professional issues. Didactic and practical experiences prepare the graduate for the multitude of roles open to clinical child psychologists. Students can assume positions in research/teaching in universities, medical schools, and internship training sites, and direct service delivery in mental health centers, hospitals, and schools.

This implements the recommendations of the national conferences on training and follows an articulated model of training in a comprehensive, integrated format. Course work and research/clinical experiences provide the bases in development, psychopathology, assessment and diagnosis, and intervention in mental health work with children, adolescents, and families. Students can complete course work, practica, and research requirements for the doctorate in four years of full-time study followed by a required one-year predoctoral internship at an approved site, although some take longer. Students are expected to, and indeed want to, participate maximally in research and clinical experiences. A master’s thesis, qualifying examination, and doctoral dissertation are formal milestones of progress in addition to regular evaluation in courses, practica, and yearly faculty review.

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.
Clinical Child Psychology; Communication Studies

Applications may be made through either department. Submit your application to the Graduate School online at [www.graduate.ku.edu](http://www.graduate.ku.edu). Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7353

Admission is highly competitive. All completed files are reviewed and incoming students selected by an admissions committee of advanced students and faculty members, headed by the Clinical Child Psychology 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 average from previous educational institutions, scores on the Graduate Record Examination (verbal, quantitative, analytical, and advanced test in psychology), statement of career interests, statement of experience in research and with clinical populations, statement of interests in clinical and research work with faculty, a writing sample, and three letters of recommendation. Financial aid is available.

The Clinical Child Psychology Training Program includes a core faculty with specialty interests in clinical child and pediatric psychology.

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.

Clinical Child Psychology Curriculum
The following curriculum meets criteria for APA accreditation and KU Graduate School requirements.

Psychology Core
1. Biological Aspects
   - PSYC 961 Biological Foundations of Psychopathology
2. Cognitive/Affective Aspects
   - HDFL 870/PSYC 870 Cognitive Development
3. Social Aspects
   - HDFL 880/PSYC 880 Social Development or PSYC 777 Social Psychology: Theory, Research and Clinical Applications
4. History of Psychology
   - PSYC 805 History of Psychology or HDFL 891 The History and Systems 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
Psychopathology, Psychodiagnosis, and Psychological Assessment. Required:
- PSYC 965 Psychopathology in Children
- PSYC 850 Psychological Clinic I (Abilities Assessment)
- HDFL 812/PSYC 812 Behavioral and Personality Assessment of Children
- HDFL 814/PSYC 814 Advanced Child and Family Assessment

Intervention and Therapy Procedures. Required:
- PSYC 976 Therapeutic Interventions with Children
- PSYC 967 Psychotherapy with Families or PRE 956 Theory of Marriage and Family Counseling

Clinical Practice. Required: (17 credit hours, 275 contact hours):
- HDFL 846/PSYC 846 Practicum in Clinical Child Psychology I
- HDFL 847/PSYC 847 Practicum in Clinical Child Psychology II
- HDFL 943/PSYC 943 Practicum in Clinical Child Psychology III
- HDFL 944/PSYC 944 Practicum in Clinical Child Psychology IV
- HDFL 947/PSYC 947 Advanced Practicum in Clinical Child Psychology V

Ethics/Professional Standards. Required:
- PSYC 975 Professional and Ethical Problems in Clinical Psychology
- HDFL 809/PSYC 809 Professional Issues: Clinical Child Psychology (one semester)

Students are expected to function within the code of ethics in their behavior and personal demeanor. Adherence to these ethical principles is part of the regular evaluation of students for completion of the degree in clinical child psychology.

Research and Statistics Core Courses
Required:
- HDFL 815/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 904 Regression Analysis

Alternatives to PSYC 791/PRE 904 include
- HDFL 803 Experimental Child Study and
- HDFL 796 Laboratory in Behavioral Development and Modification: The Analysis of Behavior or
- HDFL 940 Measurement and Experimental Design for Applied Research

Special Research Skill. Demonstrated computer competence or additional statistical or data analysis course.

Elective Cluster. Combination of 9 or more credit hours forming a specialty cluster of knowledge and skills.

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 HDFL 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 HDFL 963/PSYC 963 for a total of 3 credit hours.

Courses
See the course listings for the Departments of Psychology and of Human Development and Family Life.

Communication Studies
Chair: Robert Rowland
Bailey Hall, 1440 Jayhawk Blvd., Room 112
Lawrence, KS 66045-7574, (785) 864-9868
[www.ku.edu/cwsi/units/coms2](http://www.ku.edu/cwsi/units/coms2)

Graduate Adviser: Donn W. Parson,
116D Bailey Hall, (785) 864-9874

Professors: Asuncion-Lande, Carlin, Downs, Hummert, Keyton, Parson, Rowland

Courtesy Professors: Kemper, Shelton

Professors Emeriti: Baumgartel, Conboy, Crockett, Kerkman, Linkugel

Associate Professors: Baym, Beisecker, Friedman, Gold, Pennington

Assistant Professors: Banwart, Dennis, Harris, Kunkel, Manolescu, Monberg, Russo

All domestic M.A. and Ph.D. applicants on the Lawrence or KU Edwards campus 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 to the Graduate School online at [www.graduate.ku.edu](http://www.graduate.ku.edu). Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535
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
      COMS 859 Proseminar in Communication Studies .................................... 3
      COMS 889 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 nonthesis 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 Proseminar in Communication Studies .............................. 3
      COMS 860 Introduction to Research Methods ..................................... 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:
      (a) One hour written over required courses.
      (b) Two hours written over the first major area of communication.
      (c) Two hours written over the second major area of communication.
      (d) 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 the following:
   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 itself. These 18 hours may be distributed and 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) ........................................... 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 Correlated and Multivariate Analysis (3)
   PRE 905 Multivariate Analysis (3)
   PRE 908 Confirmatory Factor Analysis and Multivariate Statistical Modeling (3)

Historical/Critical
   HIST 805 The Nature of History (3)
   ENGL 908 Seminar in Literary Criticism: ____ (3)
   COMS 955 Seminar in Rhetorical Criticism (3)
   TH&F 920 Practicum in Criticism (3)
   COMS 950 Seminar in Speech: Textual Criticism (3)
   COMS 951 Seminar in Movement Theory and Genre Criticism (3)
   COMS 952 Seminar in Mythic and Narrative Approaches to Rhetorical Criticism (3)

Qualitative/Empirical
   ANTH 730 Linguistics in Anthropology (3)
   SOC 813 Field Methods and Participant Observation (3)
   COMS 848 Communication Audits in Organizations (3)
   COMS 850 Qualitative Research Methods in Communication Studies (3)

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.

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.

   5. Ph.D. dissertation (10 or more hours).
   6. Satisfactory completion of the oral and written comprehensive examination.
   7. Final oral examination.

Communication Studies Courses
   COMS 530 Internship in Communication Studies (1-3).
   COMS 531 Seminar in Leadership Strategies and Applications (3).
   COMS 532 Service Learning Practicum (1-3).
   COMS 534 Interpersonal Communication in Organizations (3).
   COMS 537 Communication in Conflict Resolution (3).
   COMS 538 Persuasion Theory and Research (3).
   COMS 539 Argumentation (3).
   COMS 540 Human Relations in Group Interaction I (3).
   COMS 543 Group Leadership Practicum (1-3).
   COMS 544 Advanced Interpersonal Communication: Theories and Research (3).
   COMS 546 Communication Across the Life-span (3).
   COMS 547 Communication and Culture (3).
   COMS 548 Theories of the Interview (3).
   COMS 549 Communication in Service and Sales (3).
   COMS 550 Ethical Issues in Public Communication (3).
   COMS 551 The Rhetoric of Black Americans (3).
   COMS 552 The Rhetoric of Women’s Rights (3).
   COMS 553 The Rhetoric of Political Campaigns (3).
   COMS 559 Seminar in: _____ (1-3).
   COMS 560 Seminar in: _____ (1-3).
   COMS 590 Nonverbal Communication (3).
   COMS 603 Topics in Presidential Rhetoric: ____ (3).
   COMS 605 Speech Writing (3).
   COMS 607 Political Communication (3).
   COMS 620 Communication and New Technology (3).
   COMS 639 Legal Communication (3).
   COMS 647 Issues in Intercultural Communication (3).
   COMS 667 Interpersonal Communication in Multinational Organizations (3).
   COMS 669 Human Conflict and Peace (3).
COMS 710 Survey of Theory and Research in Organizational Communication (3). This course examines the theoretical and philosophi- cal underpinnings of organizational communication research. Course topics cover variable analytic traditions 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 communica- tion. This course presents rhetorical analysis of organizational situa- tions and audiences, focusing on corporate decision-makers. Included are informative and persuasive communications such as board presen- tations, requests for proposal and responses to RFPs, grant proposals, and persuasive presentations for adoption, implementation, or evalua- tion of organizational programs. Course is limited to Regents Center students only. LEC

COMS 741 Special Topics in Human Relations: _____ (2-3). Advanced study in special areas. Prerequisite: Six hours of human relations and consent of instructor. RSH

COMS 784 Prosseminal in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and inter- disciplinary research in communication and aging. May be repeated for credit. (Same as PSYC 784.) (Same as SPHL 784.) Prerequisite: Consent of instructor. LEC

COMS 787 Gerontology Prosseminal (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology and geronomics. Participants provide an interdisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied re- search, social models of aging, and policy and management issues in geron- tology. (Same as AMS 787, HDFL 787, PSYC 787, and SOC 787.) LEC

COMS 807 Rhetoric, Politics and the Mass Media (3). This course investigates the ways in which rhetorical strategies (persuasive and lin- guistic usage) permeate the relationship between politics and politi- cians 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 to see how political decisions are influenced by and influence the media. LEC

COMS 810 Organizational Communication: Theory and Research (3). This course examines the theoretical and philosophical underpin- nings of organizational communication research. Course topics cover variable analytic traditions and systems theory, as well as cultural, criti- cal, and various interpretive approaches to understanding communica- tion in organizational contexts. Prerequisite: COMS 310 and permis- sion of instructor. LEC

COMS 835 Impression Formation and Interpersonal Behavior (3). In- tensive investigation of the processes involved in impression formation and of the effects of established impressions upon interpersonal commu- nication. (Same as PSYC 845.) Prerequisite: COMS 315 or PSYC 670. LEC

COMS 843 Changing Communication Behavior (3). Study of theory, research, and methods related to changing communication behavior in teaching, consulting, coaching, and/or counseling contexts. LEC

COMS 844 Seminar in Interpersonal Communication (3). This class will address current theory and research in interpersonal communica- tion. Issues addressed may include verbal or nonverbal communication in families, close relationships, initial interactions, and the like. LEC

COMS 846 Communication and Aging (3). Examination of the inter- relationship between communication and the aging process. The course will include current research and theory on such topics as intergenerational communication, language and age identity, age-stereotyping and communication, mass media and aging, age 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 work as a consulting group to analyze dime- sions of communication, communication channels, job satisfaction, organizational commitment, and communication strategies. Experience is gained in organizational research methods, instrument development, organizational analysis, feedback, and organizational development. LEC

COMS 850 Introduction to Research Methods (3). An introduction to methodological approaches to the study of communication. Ap- proaches covered will include (a) humanistic message analysis and evaluation; (b) ethnographic and observational techniques; (c) survey construction and execution; and (d) experimental design and proce- dures. Special focus on issues of validity, reliability, and bias. LEC

COMS 851 Communication Research: Historical and Descriptive (3). An introduction to types of historical and descriptive research in human communication. Library resources and methods of research will be covered. Emphasis will be placed upon preparing a research prospectus and upon writing the research report. LEC

COMS 852 Communication Research: Experimental and Quantitative Analysis (3). An introduction to the process of research in communi- cation, consideration of basic principles in research design, methods of observation and measurement, and the ap- plication of appropriate statistical techniques. LEC

COMS 855 Qualitative Research Methods in Communication Stud- ies (3). Study of strategies for describing communication behavior in particular contexts, emphasizing ethnography and specific observa- tional and interview data gathering and analysis methods. Prerequi- site: COMS 755 or equivalent. LEC

COMS 856 Communicative Theory Research: Qualitative Analysis (3). An overview of statistical techniques commonly used in commu- nication research. Content will include a review of univariate statis- tical tests such as t-test, correlation, chi-square, and other nonparamet- ric techniques of data analysis. Additionally, factor analysis of vari- ance, multiple regression, and factor analysis will be covered, along with the application of appropriate statistical techniques. Prerequisite: COMS 850tr and an introductory course in statistics. LEC

COMS 859 Prosseminal in Communication Studies (3). An overview and integration of communication studies based upon an examination of selected basic writings in the discipline. LEC

COMS 860 New Communication Technology and the Work Place (3). An examination of changes in the work place and for workers associated with new communication technologies such as e-mail, voice mail, teleconferencing, distributed computer processing, and computer-supported decision making. Emphasis is on changes in organizational communication patterns, participatory management models, and the evaluation of the outcomes of implementing work place communication technologies. To be taken by Regents Center students. LEC

COMS 898 Investigation and Conference (For Master's Candidates) (1-8). Limited to eight hours of credit toward the M.A. degree. Directed research and experimentation for M.A. students in some phase of speech science or the teaching of speech and drama. RSH

COMS 899 Master's Thesis (1-6). RSH

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: politi- cal arguments and developing consensus, communication strategies in Congressional and bureaucratic decision-making, the rhetorical presi- dency, the dissemination of political information, political, 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 466 B.C. to the decline of Roman oratory. Principal emphasis will be on Isocrates, Plato, Arist- totle, Quintillian, Cicero, and Longinus. LEC

COMS 933 Theories of Rhetoric: Neo-Classicall (3). A study of the development of rhetoric from the sixteenth to the eighteenth cen- tury. Notable departures from the classical tradition will be examined. Special concentration on the writings of Augustine and the tradition of medieval preaching. Alcuin, Ramus, Bacon, Campbell,Whately, Blair, John Quincy Adams, and the elocutionary movement. LEC

COMS 936 Seminar in Language and Discourse (3). This seminar uses interdisciplinary readings to examine central theoretical ques- tions regarding language and communication. The course moves from considering major theoretical positions to current research in communica- tion 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 top- ics in persuasion, with emphasis on the application of recent theories and experimental research to the analysis of persuasive discourse. Prereq- ury: COMS 538 or equivalent. LEC

COMS 939 Seminar in Argumentation (2-3). Examination of special problems in argumentation, with emphasis on the relationship of sys- tems of argumentation to their philosophic presuppositions. Discuss- ion of the writings of Toulmin, Natanson, 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 re- search in group communication. LEC

COMS 943 Seminar in Human Relations Training Theory (3). Con- cepts and practices of various approaches to teaching and training in human relations. Theories of group development and the trainer role. Current issues in training; sensitivity approaches, instrumented groups, theory of structured exercises, laboratory planning. Prerequi- site: COMS 540, COMS 949, or PSYC 570. LEC

COMS 944 Practicum in Human Relations Instruction (3). Supervised practicum in application of approaches to teaching and training in human relations. Prerequisite: COMS 943 and consent of instructor. FLD

COMS 946 Seminar in Communication and Intergroup Relations (3). Conceptual and theoretical frameworks for exploring and understand- ing relations between individuals from different societal groups (e.g.,

The 2004 edition of U.S. News America's Best Graduate Schools ranked KU's graduate program in speech-language path- ology seventh in the nation. KU's audiology program ranked ninth nationwide.

The KU library system contains more than four million items in a variety of media. Library users have access to an online catalog of most library holdings.
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 implications for studies involving different groups, both within the U.S. and around the world. LEC

COMS 947 Communication in 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 problems concerning agriculture, education, international 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 professional agencies. Development of conceptual schemes for conducting research and training programs on speech systems which characterize the operations 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 teambuilding, training, group development, motivation, and organizational development. LEC

COMS 950 Seminar in Public Address: Cultural Studies (3). The study of public address by historical periods or by topics. LEC

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 the 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 number 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, paying 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 illuminate 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 comprehensive 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 997 Research in: _____ (1-6). Supervised research under the direction of a faculty member on a topic of mutual interest to the faculty and graduate student. RSH
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.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Master's Degree Programs
Requirements for the Master of Arts Degree with a Major in Speech-Language Pathology
Program with Thesis. Prerequisites:
• An acceptable bachelor’s degree.
• Thirty-three hours of credit in speech pathology, including SPLH 261, SPLH 466, SPLH 568, SPLH 660, SPLH 662, SPLH 663, SPLH 665, SPLH 669, SPLH 671, and SPLH 699, or their equivalents.
• Twenty hours of credit in allied fields, including courses in physiology, linguistics, and psychology.
Degree Requirements:
1. At least 33 hours of credit in speech pathology and audiology including SPLH 660 Research Methods in Speech-Language-Hearing, SPLH 860 Evaluation of Speech and Language, SPLH 864 Advanced Clinical Practice in Speech-Language Pathology (7 credit hours), SPLH 866 Field Study in Speech-Language Pathology (5 credit hours), 4-6 hours in SPLH 890 Master’s Thesis, plus additional elective hours to attain a total of 42 to 48 hours of credit for the degree.
2. A minimum of 46 clock hours of clinical practice. At least 200 of these clock hours must be completed at the graduate level.
3. Completion of an acceptable thesis. 4. An oral examination at the end of the program.

Program without Thesis. The nonthesis program has the same degree requirements as the major in speech pathology and audiology including SPLH 660 Research Methods in Speech-Language-Hearing, SPLH 860 Evaluation of Speech and Language, SPLH 864 Advanced Clinical Practice in Speech-Language Pathology (7 credit hours), SPLH 866 Field Study in Speech-Language Pathology (5 credit hours), 4-6 hours in SPLH 890 Master’s Thesis, plus additional elective hours to attain a total of 42 to 48 hours of credit for the degree.

Requirements for the Master of Arts Degree with a Major in Audiology
1. Credit in the following courses: AUD 810, AUD 811, AUD 813, AUD 814, AUD 817, AUD 818, AUD 819, AUD 820, AUD 821, AUD 822, AUD 829, AUD 843, AUD 851, and AUD 940.
2. Supervised clinical practicum, 375 total clock hours with a minimum of 250 clock hours at the graduate level.
3. Completion of an acceptable thesis, for students choosing the thesis option.
4. An oral examination at the end of the program.

Thesis/Nonthesis Option. The student should choose either the thesis or the nonthesis option in the fall term of the first year. Students who select the thesis option should enroll in AUD 899 as directed by the thesis adviser for each semester in which thesis work is in progress. The total number of thesis hours ranges from the required minimum of 4 to a maximum of 6 credit hours.

The nonthesis program has the same degree requirements as the thesis program, except that the thesis is replaced with a 3-hour enrollment in AUD 890 Master’s Thesis, plus additional elective hours to attain a total of 42 to 48 hours of credit for the degree.

Requirements for the Master of Science in Education Degree with a Specialization in Deaf Education. For information, see Special Education in the School of Education chapter of this catalog.

Ph.D. Degree Requirements: Speech-Language Pathology or Audiology
The Ph.D. programs in speech-language pathology and in audiology offer post-baccalaureate study of normal and disordered aspects of communication. Application materials must include verbal, quantitative, and analytical Graduate Record Examination scores. Students may be admitted with bachelor’s degrees, although most have some form of master’s degree. Incoming students who do not have master’s degrees, or the equivalent, and students who have post-bachelor degrees must initiate a thesis-equivalent research project, under the direction of a three-member committee, during the first year of enrollment. This project must be completed before the comprehensive oral examination.

Program Guide Beyond the Baccalaureate Level. Upon admission to the Ph.D. program, the student and his or her adviser choose a program committee. The program 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 Graduate School 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 subject, 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.

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.

Ph.D. Degree Requirements: Child Language
For information on the Ph.D. in Child Language, see Child Language in this chapter of the catalog.

Scholarships, Assistantships, Fellowships
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 566 Language Development (3) SI.
SPLH 660 Research Methods in Speech-Language Hearing (3).
SPLH 662 Principles of Speech Science (4).
SPLH 663 Principles of Hearing Science (4).
SPLH 665 Phonetics and Phonological Development (4).
SPLH 669 Audiology I (3).
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 688 Aural Rehabilitation (3).
SPLH 699 Principles of Speech Perception (3).
SPLH 761 Aural Rehabilitation (3). Study of the communication problems associated with hearing loss. Introduction to aural habituation intervention 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 selected from topics in speech, language, and hearing. Special prerequisites 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. Course credit is earned for credit. Students will be graded S/F. (Same as HDFL 797, LING 799 and PSYC 799). 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. LEC
SPLH 820 Developmental Phonological Disorders (2). Focuses on speech and non-speech characteristics of children with developmental phonological disorders. Emphasis placed on collection and 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 neuro-anatomical 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. Anatomical, 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 laryngectomy, glottostomies, 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 covers current data about the genetic factors involved in nonsyndromic communication and learning problems, such as those commonly seen in the schools. Ethical and practical issues in these areas are discussed. (Same as HDFL 836.) LEC
SPLH 840 Language Disorders of Children: Infants and Toddlers (2). This course examines factors relating to language disorders 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 99-447 are also examined. LEC
SPLH 842 Language Disorders of 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. Management 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 related to traumatic brain injury and dementia are studied. LEC
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 Reading Disorders (2). This course addresses the perceptual, linguistic, and cognitive processes utilized in written communication. Acquired and developmental disorders of written language are examined in relation to issues concerning: characteristics, etiology, early identification, assessment, and remediation. LEC
SPLH 860 Evaluation of Speech and Language (2). Provides a general 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). Orient student to clinical procedures, policies, requirements, and expectations of programs. 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). This field study provides work experiences in clinical and/or research activities. The student takes this 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 (1-4). 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 898 Investigation and Conference (For Master’s Candidates) (1-9). (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). RSH
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 inter-
The Center for East Asian Studies is a National Resource Center funded by the U.S. government for the study of East Asia.

SPLH 963 Seminar in Hearing Science (3). Considers more advanced research problems in hearing science including psychoacoustics, speech perception, physiology. Prerequisite: Consent of instructor. LEC

SPLH 964 Seminar in Speech Pathology: _____ (1-3). LEC

SPLH 966 Seminar in Language Development (3). The examination of relevant research concerning infant speech development, vocabulary development, linguistic development, articulation development, and language retardation. (Same as HDFL 926.) LEC

SPLH 967 Seminar in Articulation (3). Research and important clinical procedures pertaining to discrimination, structural, and physiological considerations, causal factors in defective articulation, and principal therapeutic approaches are carefully examined. LEC

SPLH 968 Seminar in Communication Disorders (3). Study in depth of the communication behavior associated with brain injury and/or oral anomalies. LEC

SPLH 969 Laboratory Instrumentation for Speech and Hearing Research (3). Instruments for speech and hearing research, their design and application. Experimental 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 directed participation in designing and conducting an experimental investigation in speech or hearing. Prerequisite: SPLH 970. 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 PSTC 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). RSH

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 two of the oldest continuous civilizations of the world. The great historical contributions of China and Japan in areas such as 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.

Missouri residents should consult Reciprocal Agreements under Tuition and Fees in the General Information chapter of this catalog.

Submit your application to the Graduate School online at www.gradet.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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.

1. Chinese language and literature.
2. Japanese language and literature.
3. 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 students pursuing a concentration in either Chinese or Japanese language and literature include:

1. 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.
2. Two lecture courses dealing with East Asia.

Entrance requirements for students pursuing a concentration in East Asian cultures are:

1. 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.
2. Two lecture courses dealing with East Asia.
East Asian Languages & Cultures 227

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 while 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.

2. 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. At least 24 credit hours must be included.
   (f) Students may, in consultation with the department graduate advisor, take other credits in a discipline or disciplines closely related to their studies. East Asian area courses are offered in anthropology, geography, history, history of art, linguistics, philosophy, political science, religious studies, sociology, and theatre and film.
   (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 566 Popular Images in Japanese Culture, Literatures, and Films
ANTH 567 Japanese Ghosts and Demons

Economics
ECON 583 Economic Issues of East Asia

Geography
GEOG 506 Geography of China
GEOG 796 Asian Regions: _____

History
HIST 510 Topics in: _____
HIST 583 Imperial China
HIST 584 Modern China
HIST 587 Early Modern Japan
HIST 589 Japan Since 1945
HIST 592 Huns, Turks, and Mongols: The Nomad Factor in History
HIST 593 Modern Korea
HIST 690 Seminar: _____
HIST 756 Ch'ing Documents

History of Art
HA 503 Japanese Prints
HA 545 Early Chinese Art
HA 687 Art of Modern China
HA 705 Major Artists: _____
HA 706 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 Literature
HA 980 Seminar in Chinese Art: _____
HA 990 Seminar in Japanese Art: _____

Philosophy
PHIL 506 Chinese Thought

Political Science
POLIS 650 Governments and Politics of East Asia
POLIS 657 Government and Politics of Southeast Asia

POLS 660 The Politics and Problems of Developing Countries
POLS 678 International Relations of Asia
POLS 678 Chinese Foreign Policy
POLS 956 The Governments and Politics of Asia
POLS 957 Political Processes in Southeast Asia
POLS 960 Politics of Developing Countries
POLS 976 International Relations of Asia

Religious Studies
REL 508 Religion in China
REL 509 Religion in Japan
REL 763 Seminar in Eastern Religious Texts:
REL 762 Seminar in Eastern Religious Thought: _____
REL 776 Seminar in Religion and Society in Asia: _____

Sociology
SOC 633 Traditional Rural China and the Communist Revolution

Theatre and Film
TH&F 527 Asian Theatre and Film
TH&F 710 Styles of Acting: Classical Japanese
TH&F 810 Advanced Studies in Japanese Acting
TH&F 827 Japanese Theatre and Film

For additional courses in the above disciplines, see appropriate sections in this chapter of the catalog.

● Chinese Courses

CHIN 504 Advanced Modern Chinese I (3).
CHIN 508 Advanced Modern Chinese II (3).
CHIN 512 Advanced Chinese I (3).
CHIN 513 Advanced Chinese II (3).
CHIN 520 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 600 History of Chinese Literature (3).
CHIN 690 Seminar in Chinese Texts (1-3).
CHIN 752 Ch'ing Documents (3). Use of 19th and early 20th century Chinese documents and other historical materials. (Same as HIST 756.) Prerequisite: HIST 586 and CHIN 544, or equivalent, and consent of instructor: LEC
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 or an equivalent course: 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 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 Structure of Chinese (3).
EALC 575 Love, Sexuality and Gender in Japanese Literature (3).
EALC 583 Imperial China (3) NW.
EALC 584 Modern China (3) NW.
EALC 585 Reform in Contemporary China (3) NW.
EALC 586 Ancient and Medieval Japan (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 Languages and Cultures: _____ (1-9).
EALC 591 Topics in East Asian Languages and Cultures: _____ (1-9).
EALC 592 Huns, Turks, and Mongols: The Nomad Factor in History (3) NW.
KU is the only university in Kansas offering regular instruction in the languages, literatures, and cultures of East Asia.

The Sexual Assault Prevention and Education Program, (785) 864-3552, offers victim advocacy, peer education programs, and resources and literature on sexual assault and sexual violence prevention. Recorded referral information is available after hours.

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 580 Introduction to Japanese Research Materials (1).
- JPN 598 Readings 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 (5).
- KOR 508 Advanced Modern Korean II (5).

Ecology and Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.

Economics

Chair: Joseph Sicilian

Graduate Director of Studies: Gautam Bhattacharyya

Summerfield Hall, 1300 Sunnyside Ave., Room 213

Lawrence, KS 66045-7585, (785) 864-3501

www.ku.edu/~econ

Professors: Barnett, El-Hodiri, Rosenbloom, Weiss

Associate Professors: Bhattacharyya, Comolli, Earnhart, Faurot, Ginther, Iwata, Keating, Sicilian, Zhang

Assistant Professors: Asiedu, Jin, Ju, Juhl, Wu

The economics department offers a Master of Arts degree and a Doctor of Philosophy degree, and in conjunction with the law school, a program in which one can obtain the Master of Arts and Juris Doctor degrees. These programs help students prepare for careers in education, government, and business.

Admission

The applicant ordinarily must have an undergraduate grade-point average of B and a high B in economics and mathematics. Applicants to the M.A. and M.A./J.D. programs should have a minimum of 6 semester credit hours of calculus, a calculus-based statistics course, and one semester each of microeconomics and macroeconomics beyond the introductory level. Applicants to the Ph.D. program should also have a total of 15 semester credit hours of calculus and a course in linear algebra. A course in real analysis also is recommended. Applicants who lack the necessary preparation may be admitted provisionally and are asked to remedy any deficiencies during the first year.

All applications for admission without financial aid should be received by July 1 for the fall semester, December 1 for the spring semester, and May 1 for the summer session.
Submit your application to the Graduate School online at [www.graduate.ku.edu](http://www.graduate.ku.edu). Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

Test of English as a Foreign Language. Students whose native language is not English usually have difficulty in the program unless their English is excellent. The department requires a score of at least 570 on the individual paper-based TOEFL or 23 on the computer-based TOEFL (or the equivalent on other tests) for regular admission. Provisional admission is possible with a score between 520 and 570 (20 to 23 on the computer-based TOEFL).

**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 credit hours of graduate work, consisting of 9 hours of required core classes, ECON 700, ECON 701, ECON 715, and 21 hours of electives. At least 18 hours (including the required core classes) 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 file a preliminary plan of study with the graduate adviser. This plan may be revised.

**Thesis and Nonthesis Options.** Candidates may pursue either a thesis or a nonthesis track. Students electing the thesis track must complete a program of 24 hours of formal course work and 6 hours of thesis under the supervision of a thesis supervisor. This work is to be devoted to the completion of a satisfactory thesis. An oral examination is held upon completion of the thesis. Students electing the nonthesis track must complete 30 hours of formal course work and two research papers demonstrating the ability to analyze the literature of economics and to write up the results. Normally, this requirement is satisfied through submission of required papers during the normal course of study.

**Written Comprehensive Examination.** All candidates for the M.A. must demonstrate proficiency in the application of economic theory through a written examination taken during the last semester of enrollment.

**M.A. (Economics)/J.D. Combined Program**

Under 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 combined 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 master’s degree for 12 hours of pertinent law school work, and 8 credit hours of economics count toward the J.D. degree. The 8 hours of economics courses that count toward the law 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 students seeking the M.A. degree must have taken several foundational courses that do not count toward a graduate degree in economics—microeconomics, macroeconomics, and calculus. Further, ECON 700, ECON 701, and ECON 715 must be included in the M.A. program. The student takes only law classes the first year and spreads out the 18 hours of credit in economics in the following semesters (e.g., one course per semester).
3. This M.A. is a nonthesis degree, but the program must contain a research component represented by the completion of some independent work or seminars.
4. A final general examination in economics is required of all candidates for this degree.

**Ph.D. Degree Requirements**

**Course Requirements.** In addition to meeting the requirements of the Graduate School, the Ph.D. candidate in economics must complete a minimum of 48 credit hours of course work, at least 42 of which must be in economics.

1. All Ph.D. candidates must complete these core courses in economic theory and quantitative methods:
   - ECON 801 Microeconomic Theory
   - ECON 802 General Equilibrium and Welfare Economics
   - ECON 810 Macroeconomics I
   - ECON 811 Macroeconomics II
   - ECON 817 Econometrics I
   - ECON 818 Econometrics II

2. Course work beyond the core courses listed in (1) is a matter of choice for the student in consultation with the graduate adviser. The graduate adviser develops a program to assist the student in specialized interests. Each such program must include a sufficiently broad range of topics in economics to prepare the student for comprehensive examinations.

**Written Examinations.** Aspirants for the Ph.D. degree must pass a written departmental preliminary examination upon completion of the core courses in microeconomics, macroeconomics, and general equilibrium. Students with the proper background in mathematics and economics normally take this test after the first year of course work. This examination may be attempted no more than three times.

Each student must also demonstrate competence in two specializations within economics. This is done by completing two courses in each of these areas. Additionally, each student must complete a seminar paper in one of the two areas. Usually this paper becomes part of the student's doctoral thesis.

**Comprehensive Oral Examination.** Upon completion of most course work and other requirements for the doctorate, including research skills and residence requirements (but not the dissertation and final oral examination requirements), students must pass the comprehensive oral examination satisfactorily.

**Research Skills.** Each student is expected to attain language or other research skills necessary to meet degree requirements. The nature of these skills is determined by the content of the courses in the program and by the advice of the graduate adviser and the dis-
The Policy Research Institute brings university expertise in metropolitan studies, public policy, international relations, and economics to the state, region, nation, and globe.

Web sites for the University Theatre, www.kutheatre.com, the Lied Center of Kansas, www.ku.edu/~lied, and the Department of Music and Dance, www.ku.edu/~sfa/mad, have information about upcoming performances and recitals.

Economics

ECON 505 History of Economic Analysis (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 565 Elements of Economic Planning (3).
ECON 566 Economic Issues in China (3).
ECON 567 Economic Development of Africa (3).
ECON 590 Game Theory (3).
ECON 595 Regional Economics (3).
ECON 600 Money and Banking (3).
ECON 604 International Trade (3).
ECON 605 International Finance (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 670 Economics of Future Markets (3).
ECON 675 Introduction to Welfare Economics (3).
ECON 695 Regional Economic Analysis (3).
ECON 700 Survey of Macroeconomics (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 140, 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 macroeconomic 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 Lavoisier school, and Cambridge school. In addition, the development of economic thought in the United States during the period is treated. Prerequisite: ECON 520 and 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: BUS 368 or its equivalent; MATH 116 or MATH 121; and completion of ECON 140, ECON 520, and ECON 522 with a grade-point average of at least 3.00 (B) 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, 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 poli-
cies 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 (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 115. LEC

ECON 760 The Theory of Public Finance (3). An analysis of governmental fiscal activity and its economic effects with emphasis on the determination and incidence of budget policy. Prerequisite: ECON 520 and ECON 522; ECON 622 recommended. LEC

ECON 761 Public Sector: Urban and Regional Finance (3). An analysis of the American state and local finance scene with special emphasis on urban and regional tax and expenditure problems and issues. Prerequisite: ECON 520 and ECON 622 recommended. 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, ECON 522 and ECON 530, or consent of instructor. LEC

ECON 766 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 will 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 development; changes in social and cultural effects of economic change. Prerequisite: ECON 520, ECON 522, and ECON 525 or ECON 530, or consent of instructor. LEC

ECON 768 The Industrial Revolution (3). An examination of the development of the industrialization of England and its impact on the North Atlantic economy. Consideration will be given to the effects of demographic and technical changes upon economic structure and the changing economic relationships between nations. Prerequisite: ECON 520 and ECON 522 or consent of instructor. LEC

ECON 769 Financial Economics (3). An introduction to the economic analysis of choice under uncertainty and asset pricing theory. Topics include the general equilibrum Arrow-Debreu model of complete markets; capital asset pricing model; stochastic dominance; portfolio frontiers; mutual fund separation theorems; arbitrage pricing theory; valuation of derivative securities. Both single-period models and multi-period models will be discussed. Students should have some background in elementary linear algebra, calculus, and probability theory. Prerequisite: BUS 388 and ECON 700 or equivalent. LEC

ECON 770 Economics of the Labor Market (3). A theoretical and empirical analysis of labor supply and demand, capital investment, and labor mobility, unemployment, discrimination, and union behavior and influence. Prerequisite: ECON 520, and MATH 121 or MATH 115 and MATH 116. LEC

ECON 801 Microeconomics Theory (3). An advanced course in price and distribution theory. Prerequisite: ECON 520 and MATH 123. LEC

ECON 802 General Equilibrium and Welfare Economics (3). The study of the operation of the economic system taking into account the diversity of goods and services. Primary attention is centered upon the competitive economy. A study is made of the existence, uniqueness, stability, and comparative statics of equilibrium positions. In addition, a study is made of ways of evaluating alternative states of the economy in terms of systems of value judgments. This includes a discussion of the Arrow Impossibility Theorem; the notion of a Pareto-satisfactory process is introduced and the relationship between Pareto-optimal states and competitive equilibrium positions is studied. Prerequisite: ECON 520, LIZ.

ECON 803 Growth Theory (3). The study of Harrod-Domar growth models; the Solow model; Uzawa’s two-sector model; n-sector growth models; the Raisin-Fei development models; and other application of growth theory to public policy. Prerequisite: ECON 700 and ECON 701. LEC

ECON 810 Macroeconomics I (3). A survey of basic macroeconomic models, including Classical and Keynesian as well as more recent ones. Topics also center on monetary and fiscal stabilization policies, the role of rational expectations, and basic behavioral equations. Tradeoffs of inflation and unemployment are examined both theoretically and empirically. Prerequisite: ECON 701, or its equivalent, or consent of instructor. LEC

ECON 811 Macroeconomics II (3). Structure of dynamic models and intertemporal optimization. Monetary and real business cycle theories and long-run economic growth. Microeconomic foundations of macroeconomics, theories of explicit and implicit contracts, and implications of overlapping generations models. Prerequisite: ECON 810. LEC

ECON 817 Econometrics I (3). An intensive study of the general linear model distribution theory associated with the multivariate normal, stochastic difference equation; autocorrelation, errors in variables. Prerequisite: MATH 628. LEC

ECON 818 Econometrics II (3). The study of estimation and hypothesis testing within the context of the stochastic simultaneous equations model. Prerequisite: ECON 817. 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 emphasis on the use of Kakutani’s fixed point theorem to prove existence of equilibrium. Fixed point algorithms used to solve the general equilibrium model will be studied. The Shoven-Whalley method for introducing taxes into the general equilibrium model will be discussed and extended to open economy models with tariffs and quotas. Finally, dynamic macroeconomic models will be studied and 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 equilibrium concepts will be discussed in the context of static games, games of incomplete information, and dynamic games. These concepts will be applied to the theory of industrial organization. Topics include: the use of input-output matrices in development 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 831 Economics of Regulation (3). This course provides an analytical introduction to the study of the economic rationale for and effects of government regulation of industry. Special emphasis will be placed on public utility regulation. Prerequisite: ECON 700. LEC

ECON 835 Comparative Economic Systems (3). Comparative studies of the organization, operation, and performance of economic systems. Theoretical issues involving the comparison of different economic systems will be covered. Theoretical characteristics of advanced economic systems such as capitalist economies, socialist economies, and centrally planned economies, will be developed. Case studies of economic institutions and economic performance in various countries will be examined. Prerequisite: ECON 700 and ECON 701. 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: labor supply and demand, capital investment, 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 foundations of economic planning with emphasis on concise discussion of the logic behind the techniques utilized in economic planning. Topics that will be studied include: social welfare, restraint 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 844 Macroeconomic Issues in Development Economics (3). This course will examine the process and policies of economic development from a macroeconomic perspective. Topics will include the theory of growth in the dual economy, the role of foreign trade in economic development, inflation and stabilization in developing economies, the problem of foreign debt, the relationship between financial 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. Possible topics include optimizing, equilibrium models of exchange rate determination, empirical tests of international asset-pricing models, international money and finance, general equilibrium in the international economy, comparative statics, and stability conditions. Prerequisite: ECON 700 and ECON 701. LEC

ECON 855 Natural Resources (3). Advanced analysis of the economic relationships between natural resources, population, and environment. Emphasis is on the analytical techniques useful for solving the eco-
Economics; English

ECON 700. LEC
ECON 860. Advanced Public Finance (3). A rigorous treatment of the economic consequences of public sector. Emphasis will be placed on government expenditure and taxation. 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 critical study of selected aspects of American economic history with particular emphasis on the testing of hypotheses that have been advanced to explain the growth and development of the American economy. Prerequisite: ECON 766. 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 consumer behavior, utility maximization, stability of economic equilibrium, comparative statics, etc. Prerequisite: Consent of instructor. LEC

ECON 899. Master’s Thesis (1-10). RSH

ECON 901. Advanced Economic Theory I (3). Advanced study of current general equilibrium 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). This seminar-workshop is designed to study advanced research topics in the areas of macroeconomics and microeconomics 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 microeconomic foundations of macroeconomics, neoclassical macroeconomics with and without money, Keynesian and neo-Keynesian macroeconomics, and economic stabilization, 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 adjustment 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 critiques. The function of commercial banks, non-bank financial intermediaries, and central banks in the money supply process is addressed. Interrelationships between the tools, the instruments, the operating procedures, the intermediate targets, and the goals of policy are examined. Additional topics may include the monetary transmission mechanism, the effect of uncertainty on optimal policy decisions, the rules versus discretion debate, the monetary implications of fiscal policy, the term structure of interest rates, the causes and consequences of bank runs and financial panics, and the optimal method of constructing weighted monetary aggregates. Prerequisite: ECON 811 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 traditional econometrics of production and demand, latent variable models, panel data studies, probabilistic choice models, censored and truncated models, sample selection, disequilibrium models, duration studies, and semi- and non-parametric 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 use mainly in applied microeconomics, international finance, and development economics. Topics include empirical applications of ARCH models, VAR models (study of impulse response function, confidence and variance decomposition), unit root cointegration and long memory models. Bayesian unit root analysis, estimation and inference 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 920. Econometrics Seminar-Workshop (1-3). This seminar-workshop is designed 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 and dynamic optimization, changing economics, and disaggregated and aggregated economies. Prerequisite: ECON 802. LEC

ECON 927. Optimization Techniques I (3). Economic models involving the maximization of a scalar function subject to equality and inequality constraint where the variables are in a finite dimensional Euclidean space. Characterization of optimal points by way of first and second order derivatives and Duality theorem of mathematical programming. Prerequisite: Consent of instructor. LEC

ECON 928. Optimization Techniques II (3). Economic models involving the maximization of an integral (a vector of integrals) subject to differential equality (inequality), integral equality (inequality), and finite inequality (inequality) constraints. Characterization of optimal paths by way of first and second derivatives. Existence of optimal paths. Prerequisite: Consent of instructor. LEC

ECON 930. Economic History Seminar-Workshop (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 940. Economic Seminar-Workshop in: (1-3). This seminar-workshop is designed to study advanced research topics in the specified area of applied economics (public finance, monetary analysis, environment-energy, economic growth and development, urban economics, health care economics, natural resources, labor-manpower, international trade and finance, comparative economic systems, Soviet economics), and also provide assistance in the preparation and development of the dissertations of Ph.D. candidates in this area of specialization. LEC

ECON 950. Special Problems in Economics (1-3). 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 instructor. ECON 927 recommended. RSH

ECON 970. Advanced Labor Economics (3). A survey of recent labor economics research. Topics include labor supply and demand, human capital investment, and unemployment. Prerequisite: ECON 770. LEC

ECON 999. Doctoral Dissertation (1-10). RSH

Contemporary poets read from their work and speak to classes at KU through the visiting artist program.

The Department of English offers several options for the M.A., including one in creative writing, and accepts creative-writing dissertations.

English
Chair: James Hartman, jwalmart@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3116
Lawrence, KS 66045-7590, (785) 864-4520
www.ku.edu/~english

Associate Chair: Tom Lorenz, tlorenz@ku.edu,
3102 Wescoe Hall, (785) 864-4520

Coordinator of Graduate Studies: Philip Barnard,
philipb@ku.edu, 3118 Wescoe Hall, (785) 864-2522

Professors: Atkins, Bergeron, Boyd, Carothers, Casagrande, Cherniss, Contoski, Devitt, Fowler, Graham, Hardin, J. Harris, Hartman, Johnson, Landsberg, Lim, Quinn, Scott, Springer, Sutton

Catherine Professor: Clement

Professor Emeriti: Cobb, Drayton, Edwards, Gold, Gridley, Grier, Gunn, Habegger, Levine, Masinton, Orel, Schultz, Willingham, Worth


Associate Professors Emeriti: Cook, Lichter, Oruch

Assistant Professor: Davidson

Assistant Professors Emeriti: Cohn, Colyer, Warders

The department offers a full graduate program, leading to the M.A. (four options) 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 with 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 furnish the department with Graduate Record Examination scores in support of their applications.

Submit your application to the Graduate School online at www.grad.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66545-7555

M.A. Degree Requirements

While being continuously enrolled, a student has a total of five years to complete the master's. The candidate's program of studies should be arranged in consultation with the coordinator of graduate studies or a member of the departmental committee on graduate studies.

Students who elect to write a master's thesis (a thesis is required for Option III; Options Ia, Ib, and II are either thesis or nonthesis) must enroll in ENGL 899, normally for 6 hours. Those who do not must demonstrate their ability to do original investigation by earning grades of A or B in at least one seminar.

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. The 30 hours of credit required for the degree must include ENGL 800, a graduate course in language and philology; a graduate course in English literature before 1660, and one graduate course in each of four of the following five fields: English literature 1660-1800, 19th-century English literature, American literature to 1900, literature after 1900, and a general field embracing courses in composition studies, creative writing, and literary criticism.

Option Ib—Literature and Literary Theory. The 30 hours of credit must include ENGL 800, a graduate course in language and philology; a graduate course in English literature before 1660, and one graduate course in each of three of the following five fields: English literature 1660-1800, 19th-century English literature, American literature to 1900, literature after 1900, and a general field embracing courses in composition studies, creative writing, and literary criticism, plus two graduate courses chosen from ENGL 508, ENGL 707, ENGL 708, ENGL 709, ENGL 781, and ENGL 908.

Option II—Language, Literature, and Composition. The 30 hours of credit must include ENGL 800; at least 12 hours of courses in literature, including at least 3 hours each in English literature before 1800, English literature after 1800, and American literature; and at least 9 hours in language and composition, normally ENGL 780, ENGL 785, and ENGL 787. For those taking seminars rather than writing a thesis, the minimum is 12 hours in language and composition.

Option III—Creative Writing and Literature. The 30 hours of credit must include four graduate courses in English or American literature, three graduate courses in creative writing, an original thesis in prose fiction, poetry, drama, or nonfiction prose (6 hours), and one elective chosen from graduate courses in the Department of English or approved courses in another department (3 hours). Candidates for admission to Option III must submit samples of their creative writing along with their applications.

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, or Spanish. In each option, a final oral examination is required; in Options I and II, the examination covers a list of required and selected texts, whereas the examination for Option III consists of a defense of thesis.

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. Prerequisites for admission to graduate standing match those of the Master of Arts degree. Each doctoral aspirant must receive written permission from the graduate committee to pursue the Ph.D. A student is not ordinarily permitted to proceed beyond the master's degree without a grade-point average of at least 3.5 (on a 4.0 scale) and strong recommendations from graduate professors. Admission to the doctoral program also is based on evaluation of at least two papers submitted in graduate courses.

2. 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 ENGL 800 if not taken for the M.A.) of this course work must be taken from among courses offered by the Department of English at the 700 level and above. ENGL 997 and ENGL 999 credits cannot be included among the 24 hours.

3. Required courses: ENGL 800 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 coordinator of graduate studies, acting on behalf of the graduate committee, to take additional course work.

4. A reading knowledge of two of the following languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, or Spanish, or demonstrated fluency in one of these.

5. A comprehensive examination, to be completed after satisfaction of formal course requirements. This oral examination, not to exceed three hours in length, consists of three sections: a literary period or movement and two other parts from among an adjacent or parallel literary period or movement, an author or group of related authors not in any literary period or movement chosen, a genre, criticism and literary theory, composition theory, and English language.

6. In the semester following the comprehensive examination, a 90-minute oral field examination, which is to provide formal direction for the dissertation.

7. At least one year of supervised quarter-time teaching for qualified candidates except for those who
English

The KU English department sponsors a novelists-in-residence program.

Summer offerings in English include the Holmes Institute, involving a seminar taught each year by a distinguished visiting professor and designed for both graduate students and public school teachers.

ENGL 500 Science Fiction (3).
ENGL 508 Contemporary Literary Theory (3).
ENGL 520 History of the Book (3).
ENGL 526 African Literature: _____ (3) NW.
ENGL 530 Irish Culture (3).
ENGL 536 Readings in the Holocaust (3).
ENGL 551 Fiction Writing II (3).
ENGL 552 Poetry Writing II (3).
ENGL 553 Screenwriting II (3).
ENGL 554 Playwriting II (3).
ENGL 555 Writing Non-Fiction (3).
ENGL 567 Modern Drama: _____ (3).
ENGL 569 The Modern Tradition (3).
ENGL 570 Topics in American Literature: _____ (1-3).
ENGL 571 American Indian Literature: _____ (3) NW.
ENGL 572 Women and Literature: _____ (3).
ENGL 573 U.S. Latino/a Literature: _____ (3).
ENGL 574 African American Literature: _____ (3).
ENGL 575 Literature of the American South (3).
ENGL 579 American and British Poetry since 1945 (3).
ENGL 580 Rhetoric and Writing: _____ (5).
ENGL 587 American English (3).
ENGL 590 Studies in: _____ (1-5).
ENGL 592 Survey of: _____ (3).
ENGL 610 The Literature of England to 1500 (3).
ENGL 620 Renaissance English Literature: _____ (3).
ENGL 626 Shakespeare: The Earlier Plays (3).
ENGL 627 Shakespeare: The Later Plays (3).
ENGL 633 Milton (3).
ENGL 640 British Literature of the Restoration and Early 18th Century (3).
ENGL 641 British Literature of the Mid-to Late18th Century (3).
ENGL 646 British Drama of the Restoration and 18th Century (3).
ENGL 648 The Eighteenth-Century British Novel (3).
ENGL 650 Poetry of the Romantic Period (3).
ENGL 655 Poetry of the Victorian Period (3).
ENGL 658 The Nineteenth-Century British Novel (3).
ENGL 660 British Poetry of the 20th Century (3).
ENGL 664 The Age of Yeats and Joyce (3).
ENGL 668 The Modern British Novel (3).
ENGL 677 The American Novel in the 19th Century (3).
ENGL 678 The Modern American Novel (3).
ENGL 679 American Poetry of the 20th Century (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 prominent schools. LEC
ENGL 709 Critical Theory: Problems and Principles: _____ (3). Study of a topic such asnemies, 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 Language (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 751 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 up to a maximum of six hours. LEC
ENGL 752 Poetry Writing III (1-3). Practice in the writing of 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 up to a maximum of six hours. LEC
ENGL 753 Writers Workshop (1-3). An intensive course in writing prose fiction and/or verse. Criticism of manuscripts through group meetings and individual conferences with the instructor. Membership limited to students who submit manuscripts showing special ability in at least one of the creative writing forms. May be repeated for credit to a maximum of six hours. LEC
ENGL 767 Studies in Modern Drama: _____ (3). Reading of selected works in modern and contemporary drama. May be repeated for credit as the topic changes. LEC
ENGL 770 Studies in Life Writing: _____ (3). This course focuses on or surveys individual writers in the tradition of life writing; or intensively examines topics such as "Auto biography," "Memoir and Diary," "Biography," "Slave Narrative," "Letters," "Personal Essays," or "Auto biographical Fictions." Special emphasis within a topic, such as period, gender, or ethnicity, is possible. May be repeated for credit up to a maximum of six hours. LEC
ENGL 774 Topics in Literatures 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 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 780 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 781 Criticism and the Teaching of Literature (3). A survey of selected critical theories and of the applicability of those theories to the teaching of literature. LEC
ENGL 785 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 787 Modern English Grammar (3). A study of contemporary English: phonology, morphology, syntax, and usage. The emphasis is structural, but "traditional" grammar is referred to for contrast, example, and clarification. LEC
ENGL 790 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 Practicum in the Teaching of College English I (1). Lectures and discussion of rhetoric, linguistics, usage, prose style, and other topics related to English composition. Includes orientation, demonstration classes, weekly group meetings, and individual conferences. Required of all new assistant instructors in English. May not be repeated for credit toward graduate degree. FLD
ENGL 802 Practicum in the Teaching of College English II (2). A continuation of ENGL 801 but primarily directed to the topics of logic, figurative language, prose fiction and criticism. Includes orientation, weekly group meetings, and individual conferences. Required of all new assistant instructors in English. May not be repeated for credit toward graduate degree. 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 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 in the thirty hours required for the M.A. degree. The grade in the course will be a S or U, as determined by performance on the examination. Prerequisite: Consent of the Coordinator of Graduate Studies. RSH

ENGL 899 M.A. Thesis (1-6). RSH

ENGL 904 Seminar in Composition Theory: ______ (3). Intensive study of one or more theoretical aspects of 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 17th 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 980 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 an A or B, a grade of C or D, or a grade of S or U, as determined by performance on 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 Coordinator of Graduate Studies. Limited to 6 hours of credit toward the M.A. degree; only one three-hour enrollment may substitute for a formal course in satisfying a field distribution requirement. Normally offered only for up to three credit hours in any one enrollment. Permission of the supervising faculty member and of the Coordinator of Graduate Studies required for enrollment. RSH

ENGL 999 Doctoral Dissertation (1-12). RSH

The following course is cross-referenced as available to or recommended for students in English:

HWC 520 Literature in Translation: ______

Entomology

See Biological Sciences: Ecology and Evolutionary Biology.

Environmental Studies

See Biological Sciences Courses.

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 504 The European Union (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 Culture (3).
EURS 536 Economic Issues in Europe (3).
EURS 550 Classics of Peace Literature (3).
EURS 565 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).

The following courses are cross-referenced as available to or recommended for students in European Studies:

ECON 536 Economic Issues in Europe
ECON 605 International Finance
HIST 519 European Intellectual History of the Seventeenth Century
HIST 523 Europe between Absolutism and Revolution
HIST 524 The French Revolution
HIST 526 Nineteenth Century Europe, 1870 to the Present
HIST 537 France from the Renaissance to the French Revolution
HIST 549 Social and Economic History of Britain from 1700
POLS 607 Modern Political Theory
POLS 652 Politics in Western Europe
POLS 655 Politics of East-Central Europe

Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.

French and Italian

Chair: John T. Booker
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7590, (785) 864-9062
www.ku.edu/~frential

Graduate Adviser: Caroline Jewers,
2068 Wescoe Hall, (785) 864-9076

Professors: Kozma, Pasco

Professors Emeriti: Dinneen, Johnson

Associate Professors: Booker, Fourny, Jewers, Kelly

Assistant Professor: Gillespie, Hayes

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.
Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

M.A. Degree Requirements
1. Thirty credit hours, including
   (a) FREN 700 Old French
   (b) FREN 720 Introduction to Graduate Studies in French
   (c) FREN 610 Thème et Version or FREN 620 Expository French Writing
   (d) two seminars of 3 hours each or a thesis (FREN 899, 6 hours)

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 those of the Graduate School and those outlined above for the master’s degree in French.
1. Thirty credit hours beyond the M.A. (excluding dissertation hours).
2. FREN 701 History of the French Language or FREN 703 Structure of Modern French.
3. FREN 810 Criticism and Critical Methods.
4. 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.
5. A satisfactory command of written and spoken French and a reasonable familiarity with the history and civilization of France.
6. The completion of at least one year of half-time teaching in the department.
7. 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.

Departmental Assistance
The department offers graduate teaching assistantships to students pursing graduate degrees. In addition, graduate students are eligible to apply for Graduate School Fellowships (see Fellowships and Scholarships in the Graduate School and International Programs chapter) 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 Provençal (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 710 Explication de Texte (3). Methods of textual analysis. Close study of limited number of texts. 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 research methods, and 3) training in preparation of critical essays and theses. Required of all M.A. candidates unless specifically released by department. LEC
FREN 730 Introduction to French Poetry (3). A detailed introduction to versification, 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 re-cuils, on poetic theory, and on the relation of poetry to other genres and media may be incorporated. LEC
FREN 740 Medieval French Literature (3). Literary history of the period, with discussion of representative works read for the most part in the original old French. LEC
FREN 750 French Literature of the Sixteenth Century (3). A survey of the major writers, covering Babelais, Scève, Louise Labé, Marguerite de Navarre, Ronsard, Du Bellay, Montaigne, and d'Aubigné. LEC
FREN 763 French Drama of the Seventeenth Century (3). Development of baroque and classical French drama, with emphasis on Corneille, Molière, and Racine. LEC
FREN 765 Nondramatic French Literature of the Seventeenth Century (3). Esthetics of baroque and classicism. Emphasis on Descartes, Pascal, La Rochefoucauld, Mme de Lafayette, although other authors may be studied. LEC
FREN 770 French Literature of the Eighteenth 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). Important 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, Parnassianism. 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 La recherche du temps perdu. LEC
FREN 799 Masters Seminar (1). To meet Masters degree requirement for continual enrollment. This course will be graded satisfactory/unsatisfactory. FLD
FREN 800 Studies in: _____ (3). Study of topics not limited to one century. LEC
FREN 810 Criticism and Critical Methods (3). Literary criticism from historical, theoretical, 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 824 Arthurian Literature in France (3). Origins and development of Arthurian legend; analysis of major texts. Prerequisite: FREN 700. LEC
French & Italian; Geography

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 Sixteenth Century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC
FREN 866 Studies in Seventeenth Century French Literature (3). Various movements, 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 Eighteenth Century in France (3). Origins and development to Revolution; thematic analysis with attention to critical attitudes and their influence upon evolution of novel as genre. LEC
FREN 878 Studies in Eighteenth Century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC
FREN 887 Symbolist Movement in France (3). Works of major symbolist poets, including Baudelaire, Verlaine, Rimbaud, Mallarmé, and Valéry. LEC
FREN 888 Studies in Nineteenth Century French Literature (3). Various movements, 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 Twentieth Century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC
FREN 899 M.A. Thesis (1-6). RSH
FREN 900 Seminar in French (3). Topics in literary, linguistic, and cultural research. May be repeated for credit with departmental permission. LEC
FREN 910 Bibliography and Research Methods (3). Methods and means of research. Practice in compiling bibliography, wherever possible in conjunction with work done concurrently in another course. Limited to doctoral aspirants. LEC
FREN 995 Investigation and Conference (1-3). Readings and research projects in French literature, language, and culture. Directed work to fulfill needs not met by available courses. One-three hours credit in any semester. Maximum credit for MLA Three hours. By special departmental permission only. RSH
FREN 999 Ph.D. Dissertation (1-10). RSH

● 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).

Geography
Chair: Terry Slocum
Associate Chair: William C. Johnson
Linfield Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7613, (785) 864-5143
www.geom.ku.edu
Graduate Adviser: J.R. Shortridge,
207 Linfield Hall (785) 864-5538
Professors: Dienes, Johnson, Price, J.R. Shortridge
Professors Emeriti: McColl, Nunley
Associate Professors: Feddema, Herlihy, McCleary, Myers, Slocum, Sorenson, Terwilliger
Assistant Professors: Egbert, Li, B.G. Shortridge

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 nonthesis option requires a minimum of 36 hours of courses and seminars and is not intended to serve as a foundation for the Ph.D. Both degrees require 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).

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.

French & Italian; Geography

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
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.

- 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.
- Mathematics: pass 9 hours of courses at the 500 level or above.
- Statistics: pass 9 hours of courses outside the geography department at the 500 level or above.
- Demonstrate research capability in a field relevant to the aspirant's field(s) of specialization within geography. Examples are economics, sociology, psychology, 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 Graduate School's requirement for two semesters (or one semester and one summer) of residence in full-time academic pursuits also must be fulfilled before taking the comprehensive examinations.

For additional Ph.D. requirements, please see Doctoral Degree Requirements in the General Information chapter of this catalog.

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 Georheology (3).
- GEOG 535 Introduction to Soil Geography (4).
- GEOG 536 Landscape Ecology (3).
- GEOG 537 Elements of Plant Geography (3).
- 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 570 Geography of American Indians (3) NW.
- GEOG 571 Topics in Cultural Geography: ______ (1-3).
- 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 (3).
- GEOG 657 Geographic Models (3).
- GEOG 658 Applications of Geographic Information Systems: ______ (1).
- 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 (communication system) perspective 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 3 18, 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 dealing with an unfamiliar situation. Course location is dictated by the interests and composition of the student group; offered in the first three weeks of August. Geography majors are encouraged to attend. This course is required for graduate students. Fee required. Prerequisite: Junior-senior standing and at least fifteen hours of geography or consent of instructor. FLD.
- GEOG 716 Advanced Geostatistics (3). An introduction to the practical application of advanced geospatial 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 d GEOG 558 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 structure of modern geography. 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 change detection. The laboratory exercises provide hands-on experience in computer digital image processing in the department's NASA Earth Science Remote Sensing Laboratory. Prerequisite: Introductory statistics and a gd 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 Genesis, Classification, and Distribution (3). An analysis of the origin, classification, and distribution of major soil groups of the world. Field trips required. Prerequisite: GEOG 535, or consent of instructor. LEC.
- GEOG 741 Advanced Geomorphology (1-3). Detailed discussions of processes and landforms characteristic of specific environments. Considered during separate semesters will be general methodology, 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 (1-2). 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, paleoecology, paleodiet reconstruction, hydrology, and soils genesis will be examined. Knowl-
edge 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 740.) 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, resources endowment in an international setting. Prerequisite: GEOG 551 or a course in economics or consent of instructor. LEC

GEOG 758 Geographic Information Science (4). This course integrates topics in geographical information science (GISci) with spatial analytical techniques to solve spatial problems. Focuses on the most current research in GIScits relevance to the environmental sciences, natural resource management, and spatial decision-making. Students are expected to apply the concepts and techniques learned in this course to their research projects. Prerequisite: GEOG 516 and GEOG 558, or consent of instructor. LEC

GEOG 771 Topics in Cultural Geography: _____ (1-3). An investigation of special topics in cultural geography. May include specific course methodology, material culture, folklore, 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 102 or GEOG 375. 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 alternative representations of space. Prerequisite: Graduate standing or fifteen hours of geography or consent of instructor. LEC

GEOG 775 Seminar 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 575 plus an additional meeting each week is required. Prerequisite: GEOG 575 and GEOG 516, 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 USSR (3). A description and analysis of geographic data pertaining to the successor states to the USSR. Prerequisite: 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 in 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 806 Basic 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 problems, 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 techniques. Prerequisite: By appointment. 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 or consent of instructor. FLD

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 516 and GEOG 558 or equivalents, multivariate analysis recommended. LEC

GEOG 890 Geographic Internship (1-6). Supervised professional experience. The student submits to the program committee a proposal describing the internship prior to enrollment. Upon acceptance, regularly scheduled meetings with the adviser 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 adviser. 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). RSH

GEOG 911 Seminar in Cartography: _____ (1-4). Study of selected topics in cartography. Can be repeated for different topics. Prerequisite: GEOG 515 and GEOG 717 or consent of instructor. LEC

GEOG 912 Seminar in Quantitative Methods (2-3). LEC

GEOG 926 Seminar in Remote Sensing (2-4). Study of selected topics in remote sensing theory and application. May include independent or group research and/or development work. Topic will be specified in advance. Prerequisite: GEOG 726 or consent of instructor. LEC

GEOG 935 Seminar in Soil Geography (2-3). Subject matter varies but focuses on modern concepts and trends in soil geography. Sample topics include classification, pedology, and soil genesis. Field trip and fee may be required. Prerequisite: GEOG 735 or consent of instructor. 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. Prerequisite: GEOG 739 or consent of instructor. 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 developmental work. Prerequisite: GEOG 758 or equivalent, or consent of instructor. LEC

GEOG 970 Seminar in Cultural Geography: _____ (2-3). 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. Prerequisite: GEOG 770 or consent of instructor. 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). RSH
Geology

Chair: Randall Van Schmus
Lindley Hall, 1475 Jayhawk Blvd., Room 120
Lawrence, KS 66045-7013, (785) 864-2727
www.ku.edu/~geology

Graduate Adviser: Ross Black,
316A Lindley Hall, (785) 864-2740

Professors: Goldstein, Kaesler, McElwee, Steeples,
Van Schmus, Walker

Professors Emeriti: Angino, Dellwig, Dort, Enos,
Hambleton, Merrill, Robison, Rowell

Research Professor: Dreschhoff

Courtesy Professors: Allison, Butler, Carr, Doveton,
Franseen, Gerhard, Krishalka, Martin, Sophocleous,
E. Taylor, T. Taylor, Whatney, Whittemore

Associate Professors: Black, Gonzales, Kamola,
Lieberman, Macpherson, McClellan, Walton

Courtesy Associate Professor: Miller

Assistant Professors: Devlin, Hasiotis, Rogers, Stockli,
Tsotlias

Courtesy Assistant Professor: Macfarlane

The department offers the master's degree and the
Ph.D. in geology but permits specialization in a num-
ber of areas of geology and in geophysics or hydros-
ology. Active areas of instruction and research include
geomorphology, paleontology, sedimentology,
seismology, tectonics, and petroleum geology. Doctoral
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 geol-
ogy and supporting sciences, letters of recommenda-
tion, and the applicant's stated academic and profes-
ional 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 stu-
dents who meet KU's minimum standard for admission
may be refused. Students who do not hold master's de-
egrees in geology normally are admitted to pursue the
master's degree. Students with exceptional requirements
may be invited to study for the Ph.D. without first earn-
ing the M.S. degree.

Submit your application to the Graduate School on-
line at www_graduate.ku.edu. Forward all requested
supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Support for Students

All prospective students are considered for employ-
ment and financial aid. Employment may be in the
form of teaching assistantships or research assis-
tantships. Research assistantships may be supported
with funds from external grants, from Geology Associ-
ates endowments, from the Museum of Invertebrate
Paleontology, or from the Kansas Geological Survey,
which is on campus. Duties, compensation, and condi-
tions of awards are prescribed as much as possible
before enrollment. The department also receives funds
from corporations and endowments to support fellow-
ships, which permit students to enroll full time without
specific research or teaching duties.

Graduate students in geology are eligible for schol-
arships from the Geology Associates Program. En-
dowed scholarships include the Angino, Hall, Henbest,
Holdsen, Ireland, McGee, Moore, Patterson, Peoples,
and Walters scholarship funds. Other scholarships are
awarded from donations from individuals and corpora-
tions. Scholarships are awarded on the basis of aca-
demic excellence; some funds are designated for pro-
tected minorities or women.

Through the Selig Fund and other donations, the
department supports graduate student field work.
Through the McCollum Fund and other donations, the
department partially underwrites some other research
expenses, such as purchase of time on analytical equip-
ment. Funding requires an acceptable thesis or disser-
tation proposal. Students who have no other sources of
research support from the department or university are
given preference. Degree-seeking students in geol-
ogy or geophysics may apply for loans from the Fritz,
Horner, and Johns loan funds.

Degree Requirements

Details of the regulations on graduate study are in-
cluded in the department's Ground Rules for Graduate
Students, available from the department office.

Prerequisites normally 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 back-
grounds in calculus and physics. Incoming graduate
students meet with a departmental advisory review
committee before enrollment to identify deficiencies,
weaknesses, 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.

The science of geology has many subdisciplines,
and the department tailors each student's curriculum
to the needs of the individual. There is no departmen-
tal 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 cur-
riculum in consultation with a three-member advisory
committee selected by the student from the graduate
college or approved by the graduate adviser. Course
work counted toward the degree must be distributed
so as to provide a comprehensive general knowledge
of geology in addition to specialized knowledge re-
quired for the thesis project. 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 and the Kansas Geological Survey as well as the Department of Geology. The committee recommends requirements for the specialty degree and coordinates educational activities in geophysics. Research is supervised by adjunct faculty members who are staff members of the Kansas Geological Survey as well as by regular faculty members. 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.

If, during or after the period of residence, the student wishes to change to an M.S. (thesis) program or a Ph.D. program, he or she must petition the graduate studies committee.

Ph.D. 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 a good background and a good performance during the first few 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 Graduate School's 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 the 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 Graduate School's 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 his or her 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 the Graduate School on the 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.

Shared Doctoral Program with Kansas State University. The department has a shared education program whereby doctoral students may study under the direction of a faculty member of the Department of Geology at Kansas State University, with a KU faculty member as co-chair of the dissertation committee. After one year of course work in Lawrence to fulfill the residence requirement, students may enroll at Kansas State University. Degrees are awarded by KU.

For specific information on departmental practices in shaping individual curricula, in controlling general examinations, and in evaluating dissertation proposals, write to the department graduate adviser.

- Geology Courses
- GEOL 505 Computers in Geology (3).
- GEOL 511 Optical Mineralogy (3).
- GEOL 512 Igneous and Metamorphic Petrology (3).
- GEOL 513 Petrology Laboratory (1).
- GEOL 514 Rock Properties 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 535 Petroleum and Subsurface Geology (4).
- GEOL 536 Subsurface Methods in Petroleum Exploration (1).
- GEOL 541 Geomorphology (4).
- GEOL 551 Engineering Geology (3).
- GEOL 552 Introduction to Hydrogeology (3).
- GEOL 555 Mineral and Energy Resources (3).
- GEOL 560 Introductory Field Geology (3).
- GEOL 561 Field Geology (3).
- GEOL 562 Structural Geology (4).
- GEOL 571 Natural Disasters (3-3).
- GEOL 572 Geophysics (3).
- GEOL 573 Geodynamics and Plate Tectonics (3).
- GEOL 575 Seismic Exploration (3).
- GEOL 576 Potential Fields Exploration (3).
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.

KU has specialized German collections in Watson Library, Spencer Library, and Wescoe Hall.

Geology

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 511 and PHSX 115 or PHSX 212. LEC

GEOL 712 Crystallography and Crystal Chemistry (1). Detailed examination of crystallography, crystal symmetry, and crystal chemistry for students needing more rigorous treatment of the subjects. Prerequisite: GEOL 512 or consent of instructor. LEC

GEOL 713 Advanced Petrology (1). Advanced topics in igneous and metamorphic petrology with emphasis on chemical and isotopic modeling. Prerequisite: GEOL 512 and GEOL 513. LEC

GEOL 714 Optical Methods (1). Principles and applications of optical crystallography to the study of minerals. Primarily intended for students needing a more rigorous treatment of optical theory. Prerequisite: GEOL 512 or consent of instructor. LEC

GEOL 715 Geochemistry (3). Application of chemical equilibria and kinetics to geological environments and processes, with emphasis on processes involving solution equilibria. Includes introduction to thermodynamic aspects of equilibria. Prerequisite: CHEM 188 and MATH 122. LEC

GEOL 716 Geologic Thermodynamics (2). Classical thermodynamics with an emphasis on phase equilibria, solid-solution chemistry, and modeling of geologic systems. Prerequisite: Second semester calculus, or permission of instructor. LEC

GEOL 717 Geochronology (2-4). Principles and applications of nuclear dating methods to geology and cosmochemistry, including use of radioisotopes in the study of the geologic time scale. Prerequisite: GEOL 512 or consent of instructor. LEC

GEOL 718 Stable Isotope Geochemistry (1-3). Principles and applications of equilibria 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, paleoecology, evolution, and biostratigraphy of microfossils, particularly foraminifera, ostracodes, and mollusks. Preparation of material for study. Applications of micropaleontology to geologic problems. Prerequisite: GEOL 521 or BIOL 108. LEC

GEOL 722 Palaeoecology (3). Principles of ecology as applied to the interpretation of past environments. Prerequisite: GEOL 723. LEC

GEOL 723 Palaeontology Museum Apprenticeship (1-6). Provides directed, practical experience in care and management of paleontology collections, public education, exhibits, and museum administration with emphasis tailored to the needs and interests of each student. Prerequisite: GEOL 723. LEC

GEOL 724 Field and Laboratory Hydrogeology of Fluid Mechanics, or consent of instructor. LEC

GEOL 725 Geophysical Data Analysis (3). Fourier analysis, sampling, and wavelet analysis, and inverse theory. Prerequisite: GEOL 551 or consent of instructor. LEC

GEOL 726 High-Resolution Seismic Imaging (3). Advanced topics in geophysical imaging of the subsurface. Prerequisite: GEOL 725. LEC

GEOL 727 Advanced Petrology (1). Advanced topics in igneous and metamorphic petrology with emphasis on chemical and isotopic modeling. Prerequisite: GEOL 512 or consent of instructor. LEC

GEOL 728 Stable Isotope Geochemistry (1-3). Principles and applications of equilibria 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 729 Micropaleontology (3). Systematics, paleoecology, evolution, and biostratigraphy of microfossils, particularly foraminifera, ostracodes, and mollusks. Preparation of material for study. Applications of micropaleontology to geologic problems. Prerequisite: GEOL 521 or BIOL 108. LEC

GEOL 730 Geophysical Imaging (3). Advanced topics in geophysical imaging of the subsurface. Prerequisite: GEOL 725. LEC

GEOL 731 Terrigenous Depositional Systems (4). Processes that operate in recent sedimentary environments, responses of sediment to those processes, and criteria for determining depositional environments of ancient sedimentary rocks. Lectures, practical exercises, and field trips. Prerequisite: GEOL 531 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 532 (may be taken concurrently). LEC

GEOL 741 Advanced Geomorphology (3). Detailed discussions of processes and landforms characteristic of specific environments. Considered during separate semesters will be general methodology, and processes of physical, chemical, and biologic processes acting on the earth's surface. Prerequisite: GEOL 541. LEC

GEOL 751 Physical Hydrogeology (3). Study of fluid flow in subsurface hydrologic systems. Investigation of the groundwater environment including porosity, and hydraulic conductivity and their relationship to typical geologic materials. Examination of Darcy's law and the continuity equation leading to the general flow equations. Illustrations of typical hydraulic testing methods to estimate aquifer parameters in various situations and the use of these parameters to model future effects. Study of the basic mechanisms that determine the behavior of typical regional flow systems. (Same as CE 754.) Prerequisite: Differential Equations and Introductory Hydrogeology of Fluid Mechanics, or consent of instructor. LEC

GEOL 752 Field and Laboratory Hydrogeology (3). Introduction to field and laboratory testing techniques used in hydrogeology. Practical experience with water level measurements, hydraulic testing (step-drawdown, slug, and pumping tests), sampling of wells for unstable and stable constituents, measurement of stable and unstable constituents, unsaturated zone sampling and measurement, and commonly used geophysical techniques. Field trips for data collection and observation. Prerequisite: Introductory course in hydrogeology and familiarity with computer use. On demand and include heat flow, wave propagation, synthetic seismograms, groundwater exploration, geothermal exploration, and exploration methods in exploration, rock mechanics, tectonophysics, rock magnetism, geophysics, seismology, and geophysical inverse theory, and others upon sufficient demand. May be repeated for different topics. (Same as PHSX 750.) Prerequisite: GEOL 572 or GEOL 573 or PHSX 328 or consent of instructor. LEC

GEOL 755 Environmental Geophysics (3). Study of fluid flow in subsurface hydrologic systems. Investigation of the groundwater environment including porosity, and hydraulic conductivity and their relationship to typical geologic materials. Examination of Darcy's law and the continuity equation leading to the general flow equations. Illustrations of typical hydraulic testing methods to estimate aquifer parameters in various situations and the use of these parameters to model future effects. Study of the basic mechanisms that determine the behavior of typical regional flow systems. (Same as CE 754.) Prerequisite: Differential Equations and Introductory Hydrogeology of Fluid Mechanics, or consent of instructor. LEC

GEOL 756 Remote Sensing (3). A course dealing with the principles and applications of remote sensing in the ultraviolet, visible, near-infrared, and microwave regions of the electromagnetic spectrum. Topics to be discussed are: theoretical concepts of energy emission; techniques for the detection of this energy; detection devices commonly used; and utilization of remote sensors in geologic, geographic, agricultural, hydrologic, oceanographic, and meteorologic studies. 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 562, GEOL 512, or GEOL 531, and GEOL 572. LEC

GEOL 771 Advanced Geophysics: ______ (1-3). Topics vary with demand and include heat flow, wave propagation, synthetic seismograms, groundwater exploration, geothermal exploration, and field methods in exploration, rock mechanics, tectonophysics, rock magnetism, geophysics, 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 or PHSX 328 or consent of instructor. LEC

GEOL 773 Seismology (3). General theory of seismic waves, wave field extrapolation (migration) by finite difference methods, construction of travelt ime curves, reflection and attenuation of coefficients, earthquake source mechanism, distribution and forecasting of earthquakes. (Same as PHSX 723.) Prerequisite: GEOL 520/572 or ARCE 250/250/250/250 or CHEM 250/250/250/250 or GEOL 250/250/250/250 or EPS 250/250/250/250. May be repeated for different topics. Prerequisite: GEOL 722, and MUSE 706. (Same as PHSX 723.) Prerequisite: GEOL 572 or GEOL 573 or PHSX 328 or consent of instructor. LEC

GEOL 774 Introduction to Museum Exhibits (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 changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic materials, and how these problems can be remedied. Storage and care of objects will be considered. (Same as AMS 714, ANTH 700, BIOL 700, HIST 722, and MUSE 706.) Prerequisite: Museum Studies student. 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 changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic materials, and how these problems can be remedied. Storage and care of objects will be considered. (Same as AMS 714, ANTH 700, BIOL 700, HIST 722, and MUSE 706.) Prerequisite: Museum Studies student. LEC
can continent. Structural and stratigraphic evolution of the continent from the Precambrian to the present.

LEC GEOL 991 Seminar in: _____ (1-5). A review of the principles of the geological sciences. Fields considered are: geomorphology, igneous petrology, metamorphic petrology, invertebrate paleontology, ground-water, geochemistry, stratigraphy, sedimentation, micropaleontology, mineralogy, structural geology, and geophysics. Several may be taken concurrently. May be taken more than once. LEC

GEOL 999 Doctoral Dissertation (1-12). RSH

**Germanic Languages and Literatures**

Chair: William Keel, german@ku.edu

Wescoe Hall, 1445 Jayhawk Blvd., Room 2080

Lawrence, KS 66045-7590, (785) 864-4657

**www.ku.edu/~german**

Graduate Director: Leonie Marx,

2076 Wescoe Hall, (785) 864-9177

Professors: Baron, Keel, Marx

Professors Emeriti: Dick, Huelserberg, Maurer

Associate Professor: Holmes

Associate Professor Emeritus: Fullenwider

Assistant Professors: Crawford, Koch, Taleghani-Nikazm

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 three specializations: German literature, Germanic philology, or Germanic linguistics.

**Admission**

In addition to the general requirements of the Graduate School, a student should have the equivalent of an undergraduate German major at KU.

Submit your application to the Graduate School online at [www.graduated.ku.edu](http://www.graduated.ku.edu). Forward all requested supporting application documents to

The University of Kansas Graduate School

Graduate Applications

1450 Jayhawk Blvd., Room 300

Lawrence, KS 66045-7535

**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, subject to the rules of the Graduate School.

GERM 701, GERM 711, GERM 721, and at least one literature course from each of the following periods:

(a) Age of Goethe or Romanticism
(b) 19th century
(c) 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 in the program 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 700 or 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, subject to the rules of the Graduate
Germanic Languages & Literatures

School. GERM 701, GERM 711, GERM 721, and at least one literature course from two of the following literary periods:

(a) Age of Goethe or Romanticism
(b) 19th century
(c) 20th century

or, in exceptional cases, equivalent seminars (GERM 960-GERM 860) 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.
3. Completed and approved master's thesis.
4. A written and oral examination.

*New teaching assistants normally must enroll in GERM 700 or 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 established by the Graduate School 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 700 or 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 required by the Graduate School, 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-American studies, 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 the libraries of the former Turner societies of 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 560 Interpretation of Literature (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 German 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 Idiomatic 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 700 Practicum for Graduate Teaching Assistants (1). Practical introduction to basic problems and techniques of teaching German. Required of assistant instructors in their first semester of teaching in the department. LEC
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 703 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 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. IND
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 732 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 of the period; combined with lectures and background readings on literary, cultural, and political history. LEC
GERM 736 Post-Romantic Nineteenth Century (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 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.

GERM 751 Special Topics in Culture: ______ (3). Intensive study of a selected topic in German culture. May be repeated. LEC

GERM 753 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 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 Romanticsim: ______ (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 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: Minnesang 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 899 Master’s Thesis (1-6). RSH

GERM 900 Workshop for Ph.D. Students (1). Introduction to job-seeking skills, including use of the computer, grant application and publication skills. To be taken in the first year of Ph.D. work. Meets in the first four weeks of the Spring semester. 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 dialect, and its role in the Germanic family of languages. Selected readings from the Heliand 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 (1-10). RSH

● Scandinavian Courses

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

Gerontology Center Interim Director: David J. Ekerdt

Gerontology Faculty Adviser: Susan Kemper

Dole Center, 1000 Sunnyside Ave., Room 3090

Lawrence, KS 66045-7555, (785) 864-4130

www.ku.edu/~kugeron

Graduate study in gerontology at KU consists of two programs, (1) Master of Arts and Doctor of Philosophy degrees in gerontology, and (2) a Graduate Concentration in gerontology. Both programs are interdisciplinary. 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 program was approved by the Kansas Board of Regents during the 1996-97 academic year. KU is one of only five universities nationwide offering the Ph.D. in gerontology. KU’s graduate program is an interdisciplinary research degree emphasizing social and behavioral gerontology. Affiliated faculty include members of the Departments of Communication Studies; Health, Sport, and Exercise Sciences; Human Development and Family Life; Psychology; Sociology; and Speech-Language-Hearing: Sciences and Disorders.

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, two copies of all undergraduate and graduate transcripts, three letters of recommendation, and scores from the Graduate Record Examination. Applicants whose first language is not English must submit scores from the Test of English as a Foreign Language. GRE and TOEFL scores should be from the last two years. Application forms and further information are available from the graduate adviser or on the program’s Web site.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School

Graduate Applications

1450 Jayhawk Blvd., Room 300

Lawrence, KS 66045-7535

Program Requirements. For the Ph.D., the student must complete all requirements of the Graduate School and the College of Liberal Arts and Sciences, including residency, 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:

1. Gerontology proseminar.
2. Six hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology).
3. Twelve hours of supplemental courses in gerontology and related fields.
4. Six hours of basic statistics courses.
5. Three hours of methodology.
6. 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:

1. Gerontology proseminar.
2. 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).
3. At least 12 hours of additional supplemental courses in gerontology and related fields.
4. Six hours of advanced statistics courses.
5. Six additional hours of methodology.
6. Completion of written and oral comprehensive examination.
7. 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. in gerontology. The maximum time limit for completing all requirements for the doctoral degree is six years after admission to the doctoral program with an acceptable masters degree or after completion of the M.A. degree in gerontology. All students are expected to be continuously involved in research. Research involvement is documentation or appropriate enrollment in research, thesis, and dissertation.

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 theories of aging, methodological issues in gerontological research, and two content areas reflecting the student's concentrations.

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. The Graduate School 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 requirements for the degree 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 Graduate School to schedule the final oral examination, 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.

Research Skills or Foreign Language Requirement. The Graduate School requires doctoral students to demonstrate competence in a research skill "distinct from the dissertation but strongly supportive thereof." 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 Graduate Concentration

The graduate concentration in gerontology supplements students' professional training by providing a foundation of basic research on aging and a multidisciplinary perspective on the issues and problems of aging. Completion of the concentration enables students to apply their specialized knowledge of the social, psychological, demographic, and biomedical aspects of aging to their own professional disciplines.

Successful completion of the concentration is indicated on the student's KU transcript. The student also...
receives a letter attesting to the successful completion of a coordinated program in aging. The concentration represents an additional credential for graduate students from a variety of academic disciplines 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 concentration in gerontology. Apply to the gerontology faculty adviser. A faculty adviser knowledgeable in aging is designated to oversee the student’s progress.

Concentration Requirements. A detailed description is available from the Gerontology Center. Students must complete a research practicum or field placement. The concentration enables students to integrate knowledge of gerontology into their academic disciplines or professional training. Course work includes the gerontology proseminar, 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 certification programs.

Courses
See course listings for the Departments of American Studies, Communication Studies, Human Development and Family Life, Psychology, and Sociology in this chapter of the catalog, the Department of Health, Sport, and Exercise Sciences in the School of Education chapter, and the School of Social Welfare chapter.

Government
Director: Paul Schumaker, schu@ku.edu
Blake Hall, 1541 Lilac Lane, Room 522
Lawrence, KS 66044-3177, (785) 864-9038
The Division of Government comprises the Departments of Political Science and Public Administration. The Department of Public Administration offers the M.P.A. degree for students interested in careers in public service. The Department of Political Science 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, public administration, and public policy. Public administration and public policy are staffed by faculty members from the Departments of Political Science and Public Administration.

Government: Political Science
Chair: Paul Schumaker, schu@ku.edu
Blake Hall, 1541 Lilac Lane, Room 522
Lawrence, KS 66044-3177, (785) 864-9038
www.ku.edu/~polsgrad
Graduate Studies Director: Paul E. Johnson, pauljohn@ku.edu, 520 Blake Hall, (785) 864-9086
Professors: Cigler, Francisco, Gerner, Loomis, Rowland, Schrödt, Schumaker, Sharp
Professors Emeriti: Drury, Fields, Getter, Heller, Lande, Nehring, Piekkalkiewicz, Tomasek
Associate Professors: D’Anieri, Haider-Markel, Heilke, Johnson, Joslyn, Kaarbo, Reich
Assistant Professors: Bayard de Volo, Daley, Herron, Kuenzi, Middlemass, Weaver, Whitford, Yap
Public Administration faculty members who regularly teach in the M.A./Ph.D. program: DeHart-Davis, Epp, Frederickson, Johnston, Longoria, Maynard-Moody, Nabhandian, Romzek
The department offers a full graduate program leading to the M.A. and Ph.D. degrees.

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 page 195), and (6) two official transcripts from each college or university attended. An official transcript is one that is sent directly from the registrar of the applicant’s school to the department. All these materials must be received before the application for admission 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.

Submit your application to the Graduate School online at www_graduate_ku_edu. Forward all requested supporting application documents to
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Fields of Graduate Study
For graduate study, courses in the department are divided into the following fields:
1. Political philosophy and empirical theory.
2. U.S. political institutions and processes.
3. Public administration.
4. Comparative politics.
5. International relations.
6. 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. Courses that satisfy the 30-credit-hour requirement for the M.A. degree must be taken from at least two subfields in political science (excluding special courses such as directed readings and thesis). Directed readings courses in excess of 5 hours cannot be
The Robert J. Dole Institute of Politics, whose west campus building was dedicated in 2003, houses the papers of former Senator Bob Dole.

Fifteen KU students have received Truman Scholarships, for outstanding potential for leadership in government, since the award was established in 1976.

counted toward the 30 hours required for the degree. Candidates may count up to 6 graduate hours taken outside the department (but in a field related to the academic program in political science) toward the 30 hours required for completion of the degree.

Applicants who have not completed at least 15 undergraduate 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 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 the six 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 six subfields in the division, a related field from an outside department, or an interdisciplinary program. If the choice is not one of the six subfields, the student must obtain written approval of the adviser and the graduate studies director. A special field committee must consist of at least three faculty members, one of whom must be from the Division of Government. This committee certifies the completion of one field and may administer a written preliminary examination. 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 FLORS requirement and Ph.D. residency requirement before registering for the preliminary examination. All incompletes 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 residency, the Ph.D. aspirant must fulfill the FLORS (foreign language or research skills) 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 513 Power in American Communities (3).
POLS 515 American Political Parties (3).
POLS 516 Public Opinion and American Democracy (3).
POLS 517 The Presidency (2-3).
POLS 519 Community Development (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 562 Women and Politics (3).
POLS 563 Comparative Political Economy (3).
POLS 564 Elections and Political Parties Around the World (3).
POLS 572 National Security Policy (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 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 629 Topics in Public Policy: ________ (1-3).
POLS 631 Professionalism and Democracy (3).
POLS 632 The Administrative State (3).
POLS 634 Bureaucratic Politics (3).
POLS 635 Public Organizations and Citizenship (3).
POLS 642 The Administrative State—Honors (3).
POLS 650 Palestinians and Israelis (3).
POLS 651 Women and Politics in Latin America (3).
POLS 652 Politics in Western Europe (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 662 Political Persuasion: Myth, Imagination, and Rhetoric (3).
POLS 663 Protest and Revolution (3).
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.
POLS 669 Topics in Comparative Politics: ______ (2-3).
POLS 670 United States Foreign Policy (3).
POLS 671 International Cooperation (3).
POLS 672 International Political Economy (3).
POLS 673 International Organization (3).
POLS 675 Russian Foreign Policy (3).
POLS 676 International Relations of Asia (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. Foreign Policy Toward the Third World (3).
POLS 684 International Law: The State and the Individual (3).
POLS 685 International Law: War, Territory, and Diplomacy (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 activi-
ties engaged in by political theorists. Thus the course focuses on sev-
eral 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 creat-
ing new political perspectives. The course focuses on historical and contemporary treatments of both epistemological issues (the possi-
bility and grounds for political knowledge) and selected substantive is-
ues (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 702 Empirical Political Theories (3). The purpose of this course is to in-
clude students in the critical evaluation and construction of empiri-
cal political theory. It will (a) introduce students to various types of po-
itical theory and the criteria for evaluating such theory, (b) consider some overarching "grand theories" of politics (such as systems theory, conflict theory, and group theory), (c) examine deductive models in political analysis (such as game theory and public choice theory), and analyze selected "theories of the middle range." Prerequisite: Political science major or graduate standing. LEC
POLS 703 Social Choice and Game Theory (3). A survey of the politi-
cal economic approach to individual and collective choice behavior
called "rational choice." The course focuses on models of voting sys-
tems and other political institutions as seen from a game theoretic
perspective. Prerequisite: Nine hours of political science or admission into the M.A. or Ph.D. 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 con-
sent of instructor. LEC
POLS 706 Research Methods I (3). An introduction to quantitative re-
search methods in political science, including probability theory and
statistical analysis, as well as background material required for these
methods. Computer applications for research and statistical analysis
accompany these topics. Prerequisite: Graduate standing, POLS 705, or consent of instructor. LEC
POLS 707 Research Methods II (3). This course covers basic tech-
niques for multivariate analysis, focusing on multiple regression. Top-
ics include interpretation of regression statistics, diagnostics for com-
mon problems, dummy variables, instrumental variables, basic time se-
ries methods including adjustment for autocorrelated error, logistic
models, and nonlinear modeling; additional techniques may be cov-
ered at the discretion of the instructor. Prerequisite: POLS 706. LEC
POLS 708 Advanced Quantitative Research Methods (3). An examina-
tion of qualitative research approaches frequently employed within po-
litical science. Topics may include the use of 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-
ism approaches, historical institutionalism, rational choice, and con-
structivism. 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). Examina-
tion of the relations between psychological mechanisms and social
milieu factors and individual political behavior. Particular attention is
devoted to understanding the development of political behavior and
political participation among adolescents and other young adults.
Prerequisite: Consent of instructor. LEC
POLS 712 The Electoral Process (3). A study of the characteristics of
voting behavior and the influences upon such behavior in the United
States. Emphasis is placed upon relevant research findings concerning
partisanship and participation in politics, and on the methodology em-
ployed 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 relevant social, economic, and political factors.
The impact of these factors on the law will be illustrated through read-
ings and discussions of selected case histories. Emphasis will be
placed upon law as a social phenomenon rather than upon its technical
aspects. Prerequisite: Twelve hours of political science and permission
of instructor for undergraduates. LEC
POLS 714 The Political Economy of Europe (3). This course examines
the political economy of Europe in the context of political, economic,
and sociological factors. Emphasis is placed upon the European union
and its effects on European politics, economy, and society. Prerequisite:
Consent of instructor. LEC
POLS 715 Political Communication (3). A seminar for students inter-
ested in the role of communication in politics. In particular, this semi-
nar will examine the functioning and role of media and the formation of
public opinion. Prerequisite: Graduate standing or consent of instruc-
tor. 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 discussion 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 lim-
ited to specific topics in the presidency, congress, and judicial pro-
cesses. 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 institu-
tions, basic theoretical frameworks, and standard methods, and places
policy-making within a broad political context. Emphasizes examples,
but relevant comparative material is employed. Prerequisite: Twelve hours of political science. LEC
POLS 721 Intergovernmental Relations (3). A survey of characteris-
tics of local, state, and federal relations and the role of political
institutions among the different levels of American government, with particular emphasis upon the role of
state agencies. Prerequisite: Nine hours of political science. LEC
POLS 726 Public Policy in Comparative Perspective (3). This semi-
nar examines the application of policy theory in regional and compara-
tive contexts. Much of the research examined focuses on comparative
public policy, but select weeks focus on specific regions of the world. A
key goal is to help students understand which theories of policy may be
best suited for universal application. LEC
POLS 753 Politics of Ideology (3). Study of ideologically-based au-
thoritarian political systems and movements, especially communist
and fascist systems and their policies and problems. Comparison of
Fascist Italy, Nazi Germany, the U.S.S.R., East-Central Europe, China,
Cuba, and developing nations. Prerequisite: Six hours in the social sci-
ences and/or history, including POLS 150, or consent of instructor. LEC
POLS 754 Politics and Government of Russia and the Central
Eurasian States (3). The collapse of the Soviet system and the prob-
lems of transforming a central planned authoritarian state into a free
market democracy. The roles of ethnic and national tensions, economic
decline, and cultural factors. Prerequisite: Eight hours in the social sci-
ences and/or history, including POLS 150, or consent of instructor. LEC
POLS 755 Politics of East-Central Europe (3). This course analyzes
Communist political theory in its application to the countries of East-
Central Europe with consideration of their traditional backgrounds and
their patterns of political, social, and economic developments. It con-
structs a theoretical model of the communist state and discusses the
variations by description and comparison of the government and politi-
cal processes of Albania, Bulgaria, Czechoslovakia, German Demo-

Government: Political Science

cratic Republic, Hungary, Poland, Rumania, and Yugoslavia. Prerequisite: Six hours in the social sciences or East European history, including POLS 150, or consent of instructor. LEC

POLS 758 Revolutionary Politics of Latin America (3). Primarily a comparative analysis of the Mexican, Bolivian, and Cuban revolutions within a framework of theories of revolutions. Some attention also to revolutionary political groupings and conditions in other Latin American countries. Prerequisite: POLS 755 or POLS 866. LEC

POLS 760 The Politics and Problems of Developing Countries (3). A focus on topics pertinent to all of the underdeveloped areas such as the role of the military, styles of political leadership, land tenure system, the role of the middle sectors, the nature of bureaucracy, the activity of the students, and foreign policy attitudes. Prerequisite: One of the following: POLS 652, POLS 755, POLS 656, POLS 657, POLS 658, POLS 659, POLS 753, POLS 754, POLS 755, POLS 756, POLS 758. 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 genocide. Prerequisite: Six hours of courses in international relations including either POLS 170 and/or relevant courses in the social sciences and modern history. LEC

POLS 775 Russian Foreign Policy (3). Examination of the history of Soviet and Russian foreign policy and current issues of foreign policy in the Post-Soviet era. Analysis of foreign policy making in Russia and the other Post-Soviet states. Emphasis on the changed nature of international security problems after the cold war and on the role of foreign policy in economic development. Prerequisite: Eight hours in the social sciences or history, including either POLS 170 or a course in Russian history. LEC

POLS 776 International Relations of Asia (3). An intensive study of the problems of ideological conflict, diplomatic relations, strategic arrangements, economic cooperation, and cultural exchange in East and Southeast Asia with special emphasis upon the role of major powers. Prerequisite: POLS 170 or a course in East Asian studies. LEC

POLS 777 International Relations of Latin America (3). A descriptive and analytical course. Emphasis will be placed upon the role of the Organization of American States in relation to hemispheric disputes and defense, relations with the United States, Latin America in respect to international law and organizations, trade and economic problems, European colonial possessions, and communism. Prerequisite: POLS 170 or a relevant course on Latin America. LEC

POLS 789 Topics in International Relations: (3-2-3). A study of selected problems in international relations. Prerequisite: Consent of instructor. RSH

POLS 810 American Politics (3). A survey and critical examination 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 811 Role of Government in American Society (3). An examination and analysis of the normative bases of public institutions and how such institutions affect democratic and administrative processes. The course requires that students evaluate their political philosophy with respect to the role of these institutions in society. 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. LEC

POLS 820 Policy Formulation 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 an 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 analysis, and policy change and learning. Substantive policy areas covered include environmental regulation, education, criminal justice, public safety, and health care. LEC

POLS 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 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 method 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 data. This course is intended to facilitate research efforts of 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 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 treatises on the nature of public administration. 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, policing, welfare, prisons, and environmental policy. (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 it will survey are: the history and development of the field; classic works and major founding concerns of the field; methodological and epistemological issues; conceptual frameworks which have characterized Comparative Politics (structural-functionalism, culturalists, state-centrists, institutionalists, rational choice, and other); theory building and the role of area studies. LEC

POLS 851 Comparative Institutions and Government (3). This course provides a survey of the subject 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 an overview 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 such topics as: culture and politics; elites, social structures, and politics; the politics of 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). An intensive study of some major research traditions and current debates in the field of international relations and their application to conflict and conflict resolution, foreign policy, and international political economy. LEC

POLS 898 Non-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 degree. RSH

POLS 907 Research Methods in International Studies (3). This course focuses on quantitative methods of research relevant to interna- tional 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, 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 developing...
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 colloquium focusing on American politics, policy-making and administration, 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. LEC

POLS 911 The U.S. Congress (3). This seminar employs various theoretical and methodological perspectives to explore the burgeoning post-1980 literature on Congress. Traditional subjects such as committees, parties, and elections are examined through applications of formal models, behavioral analyses, and participant observation. 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 State and Local 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 empirical theory and representation. 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 organization and the recruitment of party activists, 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 protest groups, movements as well as conventional interest groups. 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: _____ (2-3). A seminar to be offered as occasion demands, dealing with, but not limited to, bureaucracy, legislative policy, 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 be required to design and conduct an original research project 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 to research in judicial and jury behavior. Requirements include mastery of literature on legal reasoning, the psychological foundations of legal judgment and research designed to test propositions derived from this literature. LEC

POLS 929 Topics in Public Policy: _____ (1-3). Study of selected topics in public policy. LEC

POLS 930 Public Administration and Democratic Theory (3). This course focuses on the democratic context of public management. Topics could include: theories of state; the place of the constitution, law and regulation, political relationships and representative democracy; bureaucratic structure, administrative discretion and public responsibility; theories of equity, justice and efficiency; theories of institutions; democracy as applied to bureaucracy; and ethics for administrators. LEC

POLS 931 Public Organizations and Management (3). The course focuses on public management within a democratic context. Topics could include: theories of bureaucracy; distinctions between public and private organizations and administration; administrative or organizational behavior in leading middle range theories like role theory, group theory, communication theory; leadership, management and supervision; organizational change and innovation; and theories of decision-making including organizational public choice and "garbage cans" (models of decision-making). LEC

POLS 939 Topics in Public Administration: _____ (1-3). A study of selective topics in public administration. Course may be taken more than once. 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 colloquium 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 dissident leaders exhort citizens to act in or preclude them from acting in politics. LEC

POLS 953 Ideocratic Politics (3). Ideocratic politics includes political behavior animated by a monistic ideology. Topics include: radical political ideologies and movements, the functional and structural aspects of ideocratic systems, their causes, and their life cycles. The seminar will deal with fascism, communism, Islamic fundamentalism, and other movements and systems. The seminar is conceived as a research seminar in which the participants are expected to pursue their own research interests within the broad framework of the seminar. LEC

POLS 954 Politics in Post-Soviet States (3). In-depth study of the politics of Russia, Ukraine, and the other Post-Soviet states. Focus on the problems of transforming a centrally planned authoritarian system to a free market democracy. 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 Asia. Developed regions of the world, modern corporation 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 subjects and issues in the governments and politics of selected Asian countries. The particular focus each year will depend upon the instructor. LEC

POLS 957 Political Processes in Southeast Asia (3). A seminar on political leadership, parties, military regimes, and other selected topics of Southeast Asian politics. LEC

POLS 959 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 on the comparative study of politics in countries characterized by sub-cultural cleavages, including ethnicity, language, religion and race. The course will first survey and critique competing theoretical explanations for different patterns of conflict or peaceful cohabitation among such groups in a variety of world regions. 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 962 The Breakdown, Restoration, and Consolidation of Democracies (3). A graduate seminar focusing on the new and revived democracies of the Third World, Eastern and Southern Europe. Readings in theory will be combined with individually assigned case studies. Prerequisite: Two upper level or graduate courses in comparative politics. LEC

POLS 965 Soviet and East European Policies and Problems (3). A seminar for advanced graduate students interested in Soviet and East European affairs that combines discussion and research. The early sessions will be devoted to discussions (often led by outside speakers) of various aspects of domestic and international affairs as related to the nations of the region. The final sessions will be devoted to the presentation of papers by the students, papers prepared with the intention of submitting them for publication. LEC

POLS 970 Foreign Policy Analysis (3). Designed to acquaint students with the principal theories, approaches and types of empirical analysis generally employed to explain and interpret the creation and implementation of foreign policy. Topics include: rational actor models, collective and bureaucratic processes, societal influences, cognitive and psychological factors, and comparative foreign policy. Prerequisite: POLS 870. An undergraduate United States foreign policy class is recommended. 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 conflict 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 873.)

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 975 Foreign Policies of Post-Soviet States (2-3). Examination of the history of Soviet and Russian foreign policy and analysis of foreign policy making in Russia, Ukraine, and the other Post-Soviet states. Emphasis on Russian relations with Ukraine, the European community, and the United States. LEC

POLS 976 International Relations of Asia (2-3). Intensive analysis of major international problems of Asian countries and critical examination of the theories and methods which have been developed and applied to the systematic study of Asian international politics. LEC

POLS 978 Advanced Topics in International Relations Theory (3). Intensive examination of current theoretical debates in international relations. Topics covered will include Classical Realism and Liberalism, Neorealist/Neoliberal debate, and post-structural critiques of mainstream international relations theory. Prerequisite: POLS 870. LEC

POLS 979 Topics in International Relations: (2-3). To be offered periodically when topics of special interest arise. 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. LEC

POLS 995 Directed Research (2). Designed for advanced graduate students who are concurrently enrolled or who will be enrolled in a subsequent semester 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 S or F depending on the results of the comprehensive examination. RSH

POLS 999 Doctoral Dissertation (1-15). Enrollment for writing doctoral dissertations. RSH

The following course is cross-referenced as available to or recommended for students in Political Science:

HIST 962 Seminar in American History

Government: Public Administration

Chair: John Nalbandian, paddept@ku.edu
Blake Hall, 1541 Lilac Lane, Room 325
Lawrence, KS 66044-3177, www.ku.edu/~kuopa
(785) 864-3327, fax: (785) 864-5208

Administrative Director: Raymond J. Hummert, rhummert@ku.edu, 318 Blake Hall, (785) 864-9097

Professors: Frederickson, Maynard-Moody, Nalbandian, Romzek

Courtesy Professors: Epp, Stottlemire

Associate Professors: Davis, Goodyear, Johnston, Longoria

Assistant Professor: DeHart-Davis

The Department of Public Administration houses the Edwin O. Stene Graduate Program in Public Administration and offers a Master of Public Administration degree. The degree may be obtained through course work in Lawrence, the KU Public Management Center in Topeka, and the KU Edwards Campus in Overland Park for the Kansas City area.

Students with public administrative experience may pursue the degree under the career option through part-time studies at the three campuses or through full-time studies on the Lawrence campus.

Students without public administrative experience must complete the degree under the internship option through full-time studies on the Lawrence campus. Internship-option students most commonly specialize in local or state government.

After consultation with a faculty member, a student may develop an individualized specialization, supplementing course work in the Department of Public Administration with one or two courses offered by other departments in the university.

Admission

The academic prerequisites for regular admission to the M.P.A. program are:

1. Completion of a bachelor’s degree preferably with a background in the social sciences, including basic college algebra and statistics courses.

2. A grade-point average of B (3.0 on a 4.0 scale) for all previous university or college work (in certain circumstances, when the grade-point average is slightly below 3.0, other factors, such as strong Graduate Record Examination scores or exceptional letters of recommendation, may be considered).

Admission is competitive and limited.

A completed application includes a Graduate School application form; two official transcripts of all undergraduate and graduate work; GRE scores on verbal, quantitative, and analytic sections (may be waived under some conditions); a three- to five-page essay stating the applicant’s goals and objectives; and a non-refundable application fee (see page 195). Applicants to the internship program must have all application materials in to the department by January 15 to be considered for Graduate School fellowships; otherwise, the deadline is February 1. Career-option applicants are considered for admission each semester. Application deadlines are June 15 for fall semester, November 15 for spring semester, and April 15 for summer session.

Submit your application to the Graduate School online at www.grad.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Degree Requirements

The master’s degree is awarded after successful completion of 37 credit hours of course work. This includes 30 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 by taking two elective courses.

All students must pass a written comprehensive examination to complete the requirements for the M.P.A. degree. The time limit for earning the degree is seven years. No extensions are allowed.
M.P.A./J.D. Combined Program
The joint degree program is designed for the student who intends to combine career preparations 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 in the program 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 the Department of Public Administration, 6 hours of credit are earned during the internship in the fourth year of the program. 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 the Department of 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 the 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 as the Graduate School states, 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 programs.

Since the total course work, excluding the internship, comes to 109 hours, students pursuing the joint degree program should plan to enroll in course work for two years, and in some instances three summers.

M.P.A./M.U.P. Combined Program
This program is designed for the student with career goals that center on assuming administrative and management responsibilities in urban planning and urban affairs. It combines into three years (excluding the one-year internship required for the M.P.A. program) the normal course work required for the two-year M.U.P. degree and the two-year M.P.A. degree. The program offers students experience not only in public policy management, but in management with particular expertise in urban problem resolution.

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./M.U.P. 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 Graduate Program in Urban Planning for information about degree requirements.

See also Joint Degree Programs in the School of Architecture and Urban Design chapter of this catalog.

Ph.D Program
The Department of Public Administration cooperates with the Department of Political Science to offer a doctoral degree program.

Public Administration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUAD 639</td>
<td>Concepts of Civil Society (3)</td>
</tr>
<tr>
<td>PUAD 640</td>
<td>Public Service Leadership Practicum (3)</td>
</tr>
<tr>
<td>PUAD 641</td>
<td>Public Service Leadership (3)</td>
</tr>
<tr>
<td>PUAD 695</td>
<td>Public Service Leadership Field Research Report (3)</td>
</tr>
<tr>
<td>PUAD 824</td>
<td>Public Policy and Administration (3)</td>
</tr>
</tbody>
</table>

Ph.D Program

The Department of Public Administration cooperates with the Department of Political Science to offer a doctoral degree program.

Public Administration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUAD 639</td>
<td>Concepts of Civil Society (3)</td>
</tr>
<tr>
<td>PUAD 640</td>
<td>Public Service Leadership Practicum (3)</td>
</tr>
<tr>
<td>PUAD 641</td>
<td>Public Service Leadership (3)</td>
</tr>
<tr>
<td>PUAD 695</td>
<td>Public Service Leadership Field Research Report (3)</td>
</tr>
<tr>
<td>PUAD 824</td>
<td>Public Policy and Administration (3)</td>
</tr>
</tbody>
</table>

The Ph.D. program is designed for the student who intends to combine career preparations 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 in the program 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 the Department of Public Administration, 6 hours of credit are earned during the internship in the fourth year of the program. 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 the Department of 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 the 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 as the Graduate School states, 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 programs.

Since the total course work, excluding the internship, comes to 109 hours, students pursuing the joint degree program should plan to enroll in course work for two years, and in some instances three summers.

M.P.A./M.U.P. Combined Program
This program is designed for the student with career goals that center on assuming administrative and management responsibilities in urban planning and urban affairs. It combines into three years (excluding the one-year internship required for the M.P.A. program) the normal course work required for the two-year M.U.P. degree and the two-year M.P.A. degree. The program offers students experience not only in public policy management, but in management with particular expertise in urban problem resolution.

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./M.U.P. 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 Graduate Program in Urban Planning for information about degree requirements.

See also Joint Degree Programs in the School of Architecture and Urban Design chapter of this catalog.
Government: Public Administration; History

research investigators. Emphasis on basic concepts, research reports, and theoretical treatises 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 environment of public administration. 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 constitutional 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 theories behind selected topics in 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 an opportunity to enhance 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 focuses on the fiscal 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 intergovernmental fiscal policy. The impact of the intergovernmental system will be assessed from the perspective of specific areas and intergovernmental programs. LEC
PUAD 851 Infrastructure Management (3). A survey of land-use, infrastructure, and technology issues in municipalities. LEC
PUAD 852 Comparative Public Administration (3). This course explores current issues affecting the administration of governments around the world. Particular attention is paid to the intergovernmental arrangements in selected countries, including administrative and fiscal structures. 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 precareer students with internships, this intensive seminar is designed around issues internships confront in their working relationships. Emphasis is placed on the transition of the student from an academic environment to a professional work relationship. Class sessions deal with issues like employee socialization, power and trust, and administrative change. FLD
PUAD 895 Professional Development Seminar II (3). Continuation of PUAD 894. 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. RSH

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.

KU’s Humanities Lecture Series brings three internationally known speakers in the arts and humanities to campus each year.

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: Thomas Lewin
Wescoe Hall, 1445 Jayhawk Blvd., Room 3001
Lawrence, KS 66045-7590, (785) 864-3569
www.history.ku.edu

Director of Graduate Studies, Eric Rath,
3014 Wescoe Hall, (785) 864-9437

Professors: Alexander, Bailey, Bhana, J. Clark, Fxico, Hiner, Kuznesof, Saul, Stansifer, Strikwerda, Sweets, Wilson, Worster

Associate Professors: Bosenga, Corteguera, DeKosky, Lewin, Moran, Napier, Rosenthal, Sax, Sivan, Sponholtz, Tsutsui

Assistant Professors: Blumenthal, Brooks, K. Clark, Earle, Greene, Kelton, MacGonagle, Mendoza, Nelson, Rath, Vicente

Fields of Study
For purposes of administering the graduate program, the department recognizes nine major fields (each with subdivisions) as follows:
I. Ancient History.
II. Medieval History.
III. Modern European History.
IV. Great Britain and the Empire.
V. History of the United States.
VI. Russian and Eastern European History.
VII. East Asian History.
VIII. Latin American History.
IX. History of Science and Medicine.

Application Deadline
The application deadline for admission and financial aid consideration is December 1. For admission only, application deadlines are March 1 for fall semester and September 1 for spring semester.

Admission
For complete information on required materials, please contact the department. The beginning graduate student is expected to have earned at least 20 semester hours of college credit in history, distributed to provide an adequate foundation for advanced study. All graduate applicants in history are to take the Graduate Record Examination and have a copy of the results forwarded to the Department of History.

All students normally must complete the M.A. degree before proceeding to doctoral study. Any student who wishes to be admitted directly to the Ph.D. program must first petition his or her field committee by providing a complete progress file. This file should include a letter of support from the major adviser, GRE scores and ARTS form, and an example of a recent research or seminar paper, preferably produced in the Department of...
History. The field committee then should pass this file on to the graduate board with its recommendation.

Because scholarly work in many fields of study depends on reading competence in one or more foreign languages, the department encourages the student to have a reading competence in at least one foreign language before enrolling in the Graduate School.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

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.

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.

Each student must take HIST 805 The Nature of History or HIST 699 Philosophy of History.

Nine hours of work in courses numbered 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 advisor, who chairs the oral examining committee.

All master's candidates must produce two publishable, article-length papers (approximately 30 pages) in the two required seminars. The oral final 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
In addition to the general requirements of the Graduate School, 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 or its equivalent.

Track B. Students select two major fields, 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 or its equivalent.

For both Track A and Track B, the major and the secondary fields are those designated in this catalog and the history department graduate handbook. These include fields traditionally designated major and secondary fields and any thematic fields that may be established on the basis of an appropriate core of faculty and specified, regular course offerings. Each major thematic field requires a core course, HIST 806 Studies in: ______.

For all but U.S. history majors, a reading knowledge of at least two foreign languages, approved by the student's examining committee and the graduate committee of the department as appropriate to the student's fields of interest, is required. Satisfactory evidence of ability to read one of these languages should be presented before enrollment in the second semester of work toward the Ph.D. degree. The secondary language requirement must be satisfied before the student may take the oral comprehensive examination. Students in U.S. history may substitute an in-depth knowledge of one foreign language.

The comprehensive examination consists of a series of written examinations covering each of the student's fields, followed by an oral examination covering all of the fields.

No student may take the oral part of the comprehensive examination before completing the language requirement and a minimum of five colloquia and seminars. Two must be in the major field and one in each of the secondary fields. At least two of the five must be research seminars taken with different faculty members, and where possible, at least one of these must be taken with the dissertation supervisor. The requirements of some major fields may specify continuous enrollment in a seminar, a series of required colloquia, and so on.

History Courses
HIST 500 History of the Book (3).
HIST 501 Heroic and Archaic Ages of Ancient Greece (3).
HIST 502 Golden Age of Ancient Greece (3).
HIST 503 The Ancient History of the Near East (3).
HIST 504 Canon Law, English and Continental (3).
HIST 505 Studies in Greek Civilization: ______ (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 511 Roman Decline and Medieval Origins (3).
HIST 512 The Medieval Empire (3).
HIST 513 Early Medieval Culture (3).
HIST 514 Roman and Germanic Law (3).
HIST 515 The Crusades in Cross-Cultural Perspective (3).
HIST 516 Later Medieval Culture (3).
HIST 517 Foundations of European Law (3).
HIST 518 Economic and Social History of Europe, 1750-1914 (3).
HIST 519 European Intellectual History of the Seventeenth 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 European History of (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)
History

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 534 Origins of Modern Germany - Reformation to 1648 (3).
HIST 535 Modern German History - 1648-1848 (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 Eighteenth Century (3).
HIST 539 Britain and Ireland to 1200 C.E. (3).
HIST 540 Medieval France (3).
HIST 541 British History, 1500-1660 (3).
HIST 542 English Law, Historical and Comparative Aspects (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 Twentieth Century (3).
HIST 548 British History, 1832 to the Present. (3).
HIST 549 Social and Economic History of Britain from 1700 (3).
HIST 550 The British Empire (3).
HIST 551 Spain and its Empire, 1450-1700 (3).
HIST 552 Irish Culture (3).
HIST 553 Muslims, Christians, and Jews in Medieval Iberia (3).
HIST 554 Poland from Kings to Communists to Solidarity and After (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 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, 1680-1801 (3).
HIST 567 Oil, The Great Powers, and the Persian Gulf, 1900 to the Present (3).
HIST 568 Russia in the 20th Century (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 Borderslands in North America (3).
HIST 572 The United States Borderslands: 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: _____ (3).
HIST 583 Imperial China (3) NW.
HIST 584 Modern China (3) NW.
HIST 585 Reform in Contemporary China (3) NW.
HIST 586 Ancient and Medieval Japan (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 592 Huns, Turks, and Mongols: The Nomad Factor in History (3) NW.
HIST 593 Modern Korea (3) NW.
HIST 594 Law and Society in Traditional China (3).
HIST 595 Business and Industry in Japan (3) NW.
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).
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 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, 1941-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 United States Diplomatic History I (3).
HIST 630 United States Diplomatic History II (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 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 666 Contemporary America, 1941-Present, Honors (3).
HIST 666 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 crises, human rights, migration, free 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 medieval studies. The material 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 semesters of college Latin or the equivalent, and/or consent of instructor or 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, educational, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, ANTH 797, BIOL 788, GEOG 782, 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 an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students gaining practical experience working with various programs and developing model programs. (Same as AMS 721, ANTH 797, BIOL 784, GEOG 784, and MUSE 703.) 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 museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed as well as changing practices regarding conservation techniques. Emphasis will be placed on detection and identification 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, ANTH 700, BIOL 700, GEOG 780, and MUSE 780.) 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 integrated part of museum collection management, research, and public service. Lecture and discussion will focus on issues involved in planning and exhibiting. Laboratory exercises will provide hand experience with basic preparation techniques. Emphasis will be placed on the management of an exhibits program in both large and small museums in the major disciplines. (Same as AMS 700, ANTH 793, BIOL 787, GEOG 781, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 725 Principles and Practices of Museum and 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, ANTH 798, BIOL 786, GEOG 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 experience will be an integral part of this course. (Same as MUSE 707.) 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, as appropriate, case studies and a simulated museum organization model. (Same as AMS 731, ANTH 796, BIOL 785, GEOG 783, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 756 Ching Documents (3). Use of 19th and early 20th century Chinese documents and other historical materials. (Same as CHIN 752.) Prerequisite: HIST 586 and CHIN 544 or equivalent. LEC

HIST 799 Museum Studies Apprenticeship (1-4). Provides directed, practical experience in the collection, care, use, and/or management of historical materials. (Same as AMS 799, ANTH 799, BIOL 799, GEOG 793, and MUSE 799.) Prerequisite: Consent of instructor. Same as AMS 799. 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 805 The Nature of History (3). Analysis of what historians do and how the profession of history has developed in terms of training, concepts, and practices in both research and teaching. Consideration also of major controversies that have developed over historical method and historical interpretation, giving greatest 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 serve as an introduction to the principal standard literature in the field, and will consider the full range of methodologies or approaches appropriate to the field. LEC

HIST 807 Professional Development Colloquium (3). This course will help train future professional historians to teach, analyze concepts, prepare papers, publish articles, and write research or project proposals to prepare for positions in academia and/or public history. It involves evaluating teaching materials, designing a course (preparing syllabi, lectures, and exams), exposure to classroom technologies, understanding professional ethics, developing multicultural curricula, dealing with issues of classroom diversity (including such things as gender, minority status, and learning disabilities) and behavior problems (such as plagiarism), creating a placement file and job interviewing, preparing a conference panel and presenting public papers, working with historical societies, communities, and the general public, and exploring alternatives to the traditional academic careers. Recommended for all History Graduate Students. 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 history. The primary consideration of comparative methodologies will be analyzed. Topics will vary each term but may include the examination of such subjects as the history of urbanization, labor, colonialism, immigration, the family, political thought, or industrialization. Prerequisite: Varies with area of subtopic. LEC

HIST 812 Seminar in Historical Editing (3). This seminar is oriented toward those advanced graduate students who wish to improve their editing skills. Students who enroll may edit their own writing, the writing of other class members, or "old texts." Editing will be practiced as though the product were to be published. Students who already have publishing commitments are especially encouraged to enroll. The format of class meetings will be flexible. (Same as MUSE 712.) Prerequisite: Began editing or long experience in editing and related work. LEC

HIST 821 Colloquium in the History of the British Empire (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 to be studied include: the cultural development of urban popular culture from broadsides and newspapers to radio and telenovelas; the politics of music from the tango to the new song movement; folk art vs. High art in the city; cultural imperialism; sports and public rituals 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 822 Colloquium in Latin and 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. Colloquium students read basic literature on the Iberian background, the colonial 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 growth of the city and urban culture from the Spanish conquest to the present. Focus on such topics as crime, public health, leisure activities, artisans, unionization, residential patterns and transportation. LEC

HIST 824 Seminar in Labor in Latin America (3). Major problems inclass conflict resulting from industrialization of peripheral economies. Focus on such topics as labor movements, worker-inspired revolutions, women in the work force, the ideology of work, 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 American attitudes and policies toward other parts of the world as well as among the Latin American nations themselves. Examples of topics of interest are anti-imperialism, Pan-Americanism, foreign cultural influences, non-intervention, international cooperation and conflict, dependency, transnational corporations, regional integration, international law and doctrine and national security. LEC

HIST 826 Seminar in Twentieth Century South America (3). Research seminar which examines major topics in the recent history of the Andean and Southern Cone countries. Topics such as the history of poverty, the dirty wars and the rise of military regimes, the social collapse of Colombia, Argentina and Peru, and the persistence of traditional cultures in the face of capitalist transformations will be thoroughly explored. LEC

HIST 827 Colloquium in the Social History of Latin America (3). Explores the historiography, methods and themes of Latin American social history from the conquest to the present. Sessions will focus on specific groups including the history of indigenous groups, peasants, slaves, women, families, workers, and the poor. A long historiographical paper will be required. LEC

HIST 830 Colloquium in Eighteenth and Nineteenth-Century Britain (3). This course examines the varied elite and popular responses to the creation of a capitalist economy (agrarian and industrial) in Britain between 1750 and 1800. LEC

HIST 831 Colloquium in Twentieth-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 with the British Empire in the inter-war and post-war period. Continued 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 ecclesiastical policy, 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 557. 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 reformist and dissident movements, and finally their reactions to its collapse. LEC

HIST 847 Colloquium in Modern Russian History (3). A group reading course that begins with Russia under Peter the Great and continues through the Stalin era, 1682-1953. Basic familiarity with the chronology and main problems of this period is assumed, and each student will read a different book each week for purposes of oral and written discussion. Grades will be based on class discussion and on periodic critical essays that analyze the works read. Bibliographic and historiographic guidance will be provided. 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 Europeans, Africans, and the peoples of the Americas as a result of the emergence of transatlantic economies, empires, and cultural systems. LEC

HIST 857 Colloquium in Modern European History I - Renaissance to 1648 (3). This course will concentrate upon a number of selected topics in the history of Europe between the Renaissance and 1648. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. It is a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 857 Colloquium in Modern European History II - 1610-1789 (3). This course will concentrate upon a number of selected topics in the history of Europe between the end of the Thirty Years’ War and the outbreak of the French Revolution. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. It is a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 858 Colloquium in Modern European History III - 1748-1914 (3). From the origins of the French Revolution through the outbreak of World War I. The third in a sequence of colloquia in Modern European History. Required of 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 - 1870-Present (3). From the conclusion of the major national states in western Europe (Italy and Germany) through the two World Wars and into the contemporary era. The fourth in a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 879 Colloquium on North American Environmental History (3). Intensive study 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, including appropriate attention to new approaches and 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 manhood, womanhood, and gender systems. 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. LEC

HIST 897 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. LEC

HIST 898 Colloquium in Material Culture and History (3). This course provides an overview of 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 archeology, 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, the state of the field most topics will 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. RSH

HIST 910 Seminar in Roman History: (3). A seminar in specialized aspects of Roman history. May be repeated for credit.

HIST 911 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 BC-7 BC) 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 most significant Roman 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 BC-578 AD). 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 (24). 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 new, actively-investigated and controversial themes in British history, chiefly c. 1660-1820. 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 Field Committee in Modern European History. Students seeking advanced degrees in European history from the 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 949 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 seminar focused on major topics on 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 process. 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 1580s to the 1760s. 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. LEC

HIST 974 Seminar in American History: ______ (3). A research course focusing on selected topics in history. LEC

HIST 975 Seminar in American Diplomatic History (3). An intensive study of United States foreign policy during a selected period. 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. RSH

History of Art

Chair: Linda Stone-Ferrier
Spencer Museum of Art, 1301 Mississippi St., Room 209
Lawrence, KS 66045-7500, arthist@ku.edu
(785) 864-4713, fax: (785) 864-5091, www.ku.edu/~kuarthis

Graduate Advisers:
European and American Art History: John Pultz
302 Spencer Museum of Art, (785) 864-0127
Asian Art History (Doctoral): Marsha Haufler,
200C Spencer Museum of Art, (785) 864-4713
Asian Art History (Master's): Amy McNair,
210 Spencer Museum of Art, (785) 864-4713
Professors: Eldredge, Goddard, Haufler, Stone-Ferrier
Courtesy Professor: Younger
Professors Emeriti: Larsen, Li, Stokstad
Associate Professors: Cateforis, McNair, Pultz
Associate Professors Emeriti: Eglinski, Stump
Assistant Professors: Cornelison, Fowler, Frank, Kessler
Courtesy Assistant Professors: Earle, Huppert, Rehak

The Kress Foundation Department of Art History gives the student an understanding of the great art of the past and present in the context of the historical setting and cultural patterns from which it grows. Graduate students are provided with a knowledge of the research methods needed to analyze style and to derive meaning and expressive content from the visual arts. Holders of M.A. and Ph.D. degrees with majors in art history seek career opportunities in college and university teaching and in museum work.

Admission

The beginning graduate student is expected to hold the B.A. or equivalent degree and to have earned at least 18 hours of college credit in art history or its equivalent, distributed to provide the basic foundation for advanced study. Completed applications must be submitted by January 1 for fall admission and October 15 for spring admission. The Graduate Record Examination is required. Students should apply to the M.A. program in Asian art history or European and American art history.

Submit your application to the Graduate School online at wwwGraduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

M.A. Degree Requirements

A minimum of one year of resident study is required of Master of Arts candidates. The student must complete 30 hours of graduate credit, at least 21 of which must be in art history. The student may choose European and American or Asian courses. All course work must satisfy the grade standards established by the Graduate School. The candidate must demonstrate proficiency in the reading of a relevant foreign language, normally German, French, Chinese, or Japanese. A general written examination must be passed for the master's degree.

M.A. students must take at least four art history seminars, two of which must be numbered 800 or above. Seminars numbered in the 700 range are taught as seminars, that is, classes in which reading, gathering knowledge, and critical thinking are emphasized rather than research. Paper assignments vary. Seminars numbered 800 or above require a substantial research paper. Students may, in addition, write a master's thesis for credit of up to 3 hours.

Ph.D. Degree Requirements

Admission. Students must hold appropriate M.A. degrees. They also may be required to pass the department's M.A. general examination for admission to the program. After students holding the M.A. have been enrolled in the graduate program for no more than three semesters, they must make formal written application to the graduate faculty, who then decide whether they may continue. The formal application must include a declaration of the major specialization, prepared with the assistance of a faculty adviser. The major area normally is supported by two minor fields, one of which may be outside the department.
History of Art

History of Art Courses

- HA 500 Prints and Printmakers (3).
- HA 501 Modern Prints and Drawings (3).
- HA 502 Medieval Art (3).
- HA 503 Japanese Prints (3).
- HA 504 Spanish Art (3).
- HA 505 Special Study: ______ (3).
- HA 511 The Celts (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 Greece and Rome (3).
- HA 529 Archaeology and Art of the Ancient Near East (3).
- HA 530 Renaissance Art in Italy (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 550 The Arts of the British Isles (3) HT.
- HA 555 Irish Culture (3).
- HA 556 European Art, 1900-1945 (3).
- HA 557 Art Since 1945 (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).
- HA 582 American Art, 1860-1900 (3).
- HA 583 American Art, 1900-1945 (3).
- HA 585 The Art of Buddhism (3).
- HA 587 Japanese Sculpture (3).
- HA 589 Japanese Artistic Encounters with Europe and the United States (3).
- HA 590 Photography Since 1945 (3).
- HA 600 Biography of a City: ______ (3).
- HA 604 Special Study in Asian Art: ______ (3).
- HA 615 Special Studies in Modern Art: ____________ (3).
- HA 630 Italian Renaissance Sculpture and Architecture (3).
- HA 632 Venetian Art (3).
- HA 644 Venetian Architecture in the United States from 1860 (3).
- HA 645 History of Architecture in the United States to 1860 (3).
- HA 646 History of Architecture in the United States from 1860 (3).
- HA 650 Classical Chinese Art Texts (3).
- HA 675 Special Studies in American Art: ______ (3).
- HA 676 West African Art (3) NW.
- HA 677 African Design (3) NW.
- HA 679 African Expressive Culture: ______ (3) NW.
- HA 687 Art of Modern China (3).
- HA 704 Seminar on Christian Iconography (3). A study of subject matter in the visual arts and of modes of representing certain themes and categories of ideas and meanings in the history of art. Prerequisite: Nine hours of history and knowledge of a foreign language. LEC
- HA 705 Major Artist: ______ (1-3). The study in detail of a single artist or of an artist and his school or shop. Prerequisite: An introductory course in Western art history at the college level and the 400-level course in the period in which the artist’s work falls. LEC
- HA 706 Seminar on Special Problems in Art History: ______ (2-6). Particular art historical problems of a specific and specific nature are dealt with in this seminar. The student will engage in individual research work which will form a basis for discussions, reports, and a research paper. Prerequisite: History and knowledge of a foreign language, or consent of instructor. LEC
- HA 707 Directed Readings (1-6). Supervised study and research into special fields of art of particular interest to the student. Weekly consultations and reports. RSH
- HA 710 Museum Techniques and Functions (3). Primarily for graduate students interested in pursuing a career in art museum work. The development of the museum idea, the activities of the art museum, as well as practical experience in the various fields of art museum curatorial and public activity are among the areas studied. LEC
- HA 712 Directed Museum Study (1-6). Supervised study and research projects related to art works in the permanent collections or special exhibitions of local museums of art. Planned in consultation with a faculty member and the director of the museum. RSH
- HA 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. (Same as AAAS 715.) Prerequisite: Nine hours of Art History and/or consent of instructor. LEC
- HA 716 Art of the Early Middle Ages in the West (3). A pro-seminar in the art of the West from the Migration Period through the art of the Carolingian Empire. LEC
- HA 719 Art History Theory and Practice (3). An investigation of the methodology of art history research and writing. Includes discussion of the basic assumptions of art historians about the scholarly process: the questions scholars raise, the techniques of researching art historical problems, and the final writing of conclusions. Current essays on these issues will be analyzed and used as a background for practice in writing. Prerequisite: Nine hours of history of art, or consent of instructor. LEC
- HA 723 Romanesque Art (3). A study of Western European sculpture, painting, and architecture from the period of the Migrations, through the so-called “Dark Ages” to the creation of the Gothic style. Prerequisite: A survey of medieval art. LEC
- HA 725 The Gothic Cathedral (3). The development and spread of Gothic architecture and sculpture in France, England, Spain, and Germany. Prerequisite: A college level introduction to medieval art history. LEC
- HA 727 Medieval Spanish Art (3). The religious and secular painting, sculpture, and architecture of the Iberian peninsula during the Visigothic, Asturian, Moorish, Mozarabic, Romanesque, Gothic, and Isabelline periods. The monuments are studied in their relation to general continental developments and as vehicles for the transmission of Islamic artistic ideas to the rest of Europe. Prerequisite: A survey of Medieval art. LEC
- HA 745 Dutch and Flemish Painting of the 17th Century (3). A detailed study of the art of Hals, Rembrandt and Vermeer, on the one hand, and of Rubens and Van Dyck on the other. Prerequisite: A survey of Northern Baroque art or consent of instructor. LEC
- HA 766 Calligraphy of China and Japan (3). The history of East Asian calligraphy will be examined, including seal script, clerical script, standard script, running script, grass script, and Japanese kana scripts. The styles of outstanding masters of the past will be studied, and students will also be expected to practice these scripts and styles as part of the understanding of technique and calligraphic expression. LEC
- HA 782 Japanese Painting (3). A survey covering the development of Japanese painting from the Kofun period down to the early twentieth century. Topics will include Buddhist and other religious paintings, narrative handscrolls, suibokuga, decorative screens, genre paintings and ukiyo-e prints, and western-style paintings of the Meiji and Taisho periods. Work requirements will be greater for students enrolled at the 700 level. Prerequisite: HA 265, or HA 267, or consent of instructor. LEC
HA 783 Edo Period Painting (3). A survey of painting in Japan during the Edo Period (1615-1868), arranged by the many schools and styles of painting that were brought to a height during this era. Ink painting, Zen painting, decorative painting, naturalistic painting, literati painting, and court painting will be included. Prerequisite: A course in Japanese painting or consent of instructor. LEC

HA 785 Masters of Sung and Yuan Dynasty Painting (3). A thorough study of the works attributed to the great masters of the Five Dynasties, Sung and Yuan Dynasties (10th 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 Ch'ing painting (14th to 20th centuries) in relation to the aesthetic theories of the period and to its main stylistic trends. Prerequisite: A survey of Asian or Chinese art. LEC

HA 787 Chinese Painting (3). A survey of the development of painting in China, beginning with the earliest forms of figural and landscape description. Emphasis will be placed on the major painting traditions of the Sung, Yuan, Ming, and Ch'ing Dynasties. Prerequisite: A survey of Asian art or 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 789 Proseminar in Chinese Art (3). Critical analysis of readings on selected topics in Chinese art. May be repeated for credit up to a maximum of 12 credit hours. Prerequisite: Consent of instructor. LEC

HA 805 Seminar in Graphite Arts: A 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 graphic art, 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 authorship. 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 authorship. 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 specific topic which relates 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 semesters. 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 of 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 works of the Sung dynasty and Japanese works from the Kamakura era to the twentieth century. Prerequisite: Courses in Chinese and Japanese painting. LEC

HA 826 Seminar in Japanese Literati Art: ______ (3). A study in depth of 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). RSH

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 catalogue of some 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 960 Seminar in 20th 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 970 Seminar in Photography and Fine Art: ______ (3). Advanced study of the relationships between photographic images, prints, painting, mass media, illustration, and other forms of visual expression. Specific periods and areas of emphasis will vary. Prerequisite: Advanced study of nineteenth-century history of art. LEC

HA 980 Seminar in Chinese 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 982 Seminar in Later Chinese Art: ______ (3). A concentrated study of artists, monuments or movements in Later Chinese art. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 16 credit hours. LEC

HA 990 Seminar in Japanese 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). RSH

Human Development and Family Life

Chair: Edward K. Morris
Dole Center, 1000 Sunnyside Ave., Room 4020
Lawrence, KS 66045-7555, (785) 864-4840
www.ku.edu/~hdfl

Graduate Director: Mark Mathews,
4048 Dole Center, (785) 864-0504

Professors: Born, Fawcett, Mathews, Miller, Morris,
Roberts, Semb, Sheldon, Sherman, Vernberg

Professors Emeriti: Bushell, Etzel, Hall, LeBlanc,
Schroeder, Spradlin, Wolf
Human Development & Family Life

KU’s Schiefelbusch Institute for Life Span Studies comprises 12 centers or major programs conducting more than 100 funded research, training, and demonstration projects supported by federal grants.


The Schiefelbusch Institute for Life Span Studies comprises the Schiefelbusch Institute for Life Span Studies, which provides administrative, technical, methodological support for 120 researchers in 14 affiliated centers. Research encompasses human and community development, disabilities, and aging: notably biobehavioral approach to research the causes, prevention, and treatment of intellectual and developmental disabilities supported by the National Institute of Child Health and Human Development. The MRDDRC has research sites at the KU Medical Center and the Juniper Gardens Children’s Project in Kansas City and on the Lawrence campus. The Schiefelbusch Institute for Life Span Studies provides administrative, technical, methodological support for 120 researchers in 14 affiliated centers. Research encompasses human and community development, disabilities, and aging: notably biobehavioral approach to research the causes, prevention, and treatment of intellectual and developmental disabilities; physiology and chemistry of developmental disabilities; interventions to improve social and academic achievement of children in impoverished communities; and disability policy analyses.

Admission

Applicants seeking admission to any of the graduate programs should contact the HDFL admissions secretary for program material and application forms.

Program materials include an updated list of faculty members with descriptions of their current research and professional interests. Applicants should select at least three faculty members whose research interests match their own. These faculty members review applicants’ materials. Acceptance is secured when a faculty member agrees to serve as the applicant’s advisor and has obtained written agreement from four other faculty members to serve on the applicant’s doctoral committees.

All applicants must submit completed application forms and two official transcripts of any previous undergraduate and graduate work. Three letters of recommendation from professionals familiar with the applicant’s academic or applied background must be submitted directly to the department, not indirectly through the applicant. Graduate Record Examination scores for the verbal, quantitative, and analytical writing sections are encouraged but not required. Applicants also may submit copies of pertinent written work, published or not, as well as presented papers.

For admission for the fall semester, application materials should be on file with the admissions committee by February 15. Students who wish to be considered for university and College of Liberal Arts and Sciences scholarships should complete their applications by no later than January 15. Scholarship information can be obtained through the university and the College. Applicants should inform their prospective advisers about their scholarship applications.

For admission with full graduate standing, the department recommends that applicants have completed 12 credit hours of undergraduate or graduate course work in psychology, human development, or related fields, and 6 hours in experimental research, research methods, or statistics. These courses may be taken concurrently with enrollment in the graduate program, but applicants are advised to have completed the course work beforehand.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to: The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

M.A. Degree Requirements

To qualify for the general M.A. degree the student must earn 30 credit hours, complete an acceptable thesis, and pass a general oral examination.

The department also offers a specialized M.A. degree primarily for students interested in particular areas of human development. These may include infant, toddler, and preschool care and intervention, individualized programming, behavior analysis, and the study and design of special education programs. This program requires 40 credit hours and recommends a closely specified course of study and practicum experience. It requires a thesis and oral examination. Applicants intending to pursue this M.A. degree should have 12 hours of undergraduate credit in subjects embracing child development, psychology, family relations, education, sociology or anthropology, and at least 3 hours of credit in general biology or physiology. An undergraduate course in statistics is recommended. Students pursuing the 40-hour master’s program are not ordinarily aspirants for the doctoral program.

M.H.D. Degree Requirements

The M.H.D. degree prepares students to serve in professional positions concerned with the practical application of the principles of child behavior and human development. Students receive a thorough theoretical foundation and extensive supervised practical experience in applying these principles. The M.H.D. program is oriented toward specific professional roles.

Students must have undergraduate baccalaureate degrees in psychology, sociology, social welfare, human development, or education. In special cases, students with baccalaureate degrees in other areas may be admitted if they have had extensive relevant experience. Depending on their academic backgrounds, such students may be required to complete undergraduate courses concurrently with graduate courses.

Students must successfully complete a final comprehensive evaluation. A thesis option is possible. Almost all students admitted to the program are expected to be concurrently employed in group home
settings so that the supervised practicum experience can occur. In some cases, it may be possible to admit students who are not employed as long as suitable practicum placements can be provided.

Ph.D. Degree Requirements: Developmental and Child Psychology

The Ph.D. program develops highly competent researchers in a number of subareas: applied behavior analysis, infant and child development and learning, community psychology and development, applied gerontology, psychopharmacology, the experimental analysis of behavior, public policy studies, and independent living and rehabilitation.

Junior Colleague Model. Throughout the Ph.D. training sequence, students work closely as junior colleagues with a faculty adviser and a research group. Although students typically work with one faculty adviser, they are free to seek out a different adviser if their interests change during the course of their training.

Programs. Students may choose one of two programs. Program 1 is maximally flexible so that students may pursue individual goals and interests. Attainment of skills and competences is the main focus. At a minimum, students must take one advanced course in research methods, one course dealing with comparative theory or systems of psychology, and one course in behavioral psychology. Additional courses may be required or elected for students' programs when they consult with their advisers.

Program 2 is for students who wish to ensure breadth of training in developmental and child psychology. It is based on the American Psychological Association guidelines for programs in psychology. Requirements include courses in developmental theory, behavioral psychology, assessment, research methods, statistics, professional ethics, and in biological, cognitive, social, and individual bases for behavior. Students may pursue specialties in developmental studies, behavior analysis, or applied research and program development.

Teaching Requirement. Students must participate in the training and supervision of undergraduates. They may meet the teaching requirement by serving as half-time teaching assistants for one semester or quarter time for two semesters, assuming primary responsibility for the organization and conduct of portions of courses under the supervision of a faculty member. Students usually complete this requirement by working as paid teaching assistants or by enrolling in HDFL 941 Teaching and Conference for credit.

Research Skill. The FLORS requirement enables the student to acquire a research skill that contributes to research competence and scholarship in some depth. In Program 1, it is satisfied by courses (usually 9 credit hours) in a discipline outside human development constituting a coherent package that gives the student depth in a research skill or method of approaching the major content area. If courses in HDFL are used to satisfy part of the FLORS requirement, they must emphasize research methods as opposed to substantive content. Examples include computer science, quantitative methods, linguistics, logic, juvenile law and probation, rehabilitation, and epidemiology/health psychology.

In Program 2, one required course in each of three areas—assessment, research methods, and statistics—constitute the research skill requirement.

Master's Thesis. Students must complete an M.A. thesis as part of the Ph.D. program. Theses written in other graduate programs may be acceptable to meet this requirement.

Comprehensive Examination. Ph.D. aspirants normally take the comprehensive oral examination after satisfac-
HDFL 641 Behaviorism (3).
HDFL 642 A Behavioral Approach to Managing Problems of the Elderly (3).
HDFL 644 Practicum in Behavioral Gerontology (3-6).
HDFL 645 Evaluating Programs for Juvenile Offenders (3).
HDFL 671 Applied Behavior Analysis (3).
HDFL 677 Topics in Early Childhood Education: _____ (1-3).
HDFL 688 Practicum for Research in Behavior Analysis (3-6).
HDFL 689 Practicum for Research in Human Development (3-6).
HDFL 690 Practicum in Community Leadership and Development (3-6).
HDFL 691 Practicum in Residential Treatment for Problem Adolescents (3-5).
HDFL 692 Practicum in Community Leadership and Development, Honors (1-6).
HDFL 694 Practicum in Juvenile Problems (3-6).
HDFL 695 Administrative Internship in Early Child Development Settings (2-8).
HDFL 696 Practicum in Community-Based Residential or Day Treatment Programs for Handicapped Adults (3).
HDFL 701 Current Emphasis in Child Development: _____ (3). A survey of recent findings in selected important substantive areas of child development, such as learning, perception, and infant development, emphasizing changes in knowledge of these areas as a result of current research. Prerequisite: HDFL 160, HDFL 161, HDFL 432, or PSYC 333. LEC
HDFL 702 Curriculum Development for Young Children (3). Developing preacademic and creative curriculum with special attention to materials, skills, and teacher techniques used in early childhood education settings. Prerequisite: Consultation with instructor. LEC
HDFL 703 Community Psychology (3). Examines theories and method of understanding and influencing behavior in community settings. Students read the literature in the area and explore key concepts in lecture, discussion, and course assignments. LEC
HDFL 704 Special Topics in Clinical Child Psychology I: Diversity and Social Interventions (2). Coverage of two significant aspects of training, research, and services for children and families: (a) ethnic and cultural diversity issues, and (b) social policy and system intervention. Includes didactic and experiential activities. (Same as PSYC 704.) Prerequisite: Graduate student in clinical child psychology of consent of instructor. LEC
HDFL 705 Pediatric Psychology (3). Discussion of behavior problems commonly encountered in the pediatric population, including reviews of data-based methodologies for remediation. Topics will include general child rearing skills, bedtime problems, enuresis, encopresis, toileting 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. Prerequisite: HDFL 160, HDFL 161, HDFL 432, or PSYC 333. LEC. HDFL 706 Special Topics in Clinical Child Psychology II: Public Sector Mental Health and Prevention (2). Coverage of significant aspects of training, research, and services for children and families: (a) public sector mental health, and consultation strategies used in primary care, and (b) prevention of mental and physical problems. (Same as PSYC 706.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. LEC
HDFL 707 An Interdisciplinary Approach to Early Intervention with the Handicapped (3). Focus on pooling knowledge from the various disciplines that deal with young children, so as to design strategies for individual early interpretation and treatment by an interdisciplinary team. Designed for students from disciplines such as social work, speech pathology, psychology, nutrition, audiology, special education, physical therapy, nursing, child development and other related fields. Prerequisite: A basic child development course or consent of instructor. LEC
HDFL 709 Topics in Physiological Aspects of Child Development (4). A study of the physiological aspects of the development of the child with particular emphasis upon behavior correlates, the course of normal development, problems of measurement and current research areas. Prerequisite: HDFL 160, HDFL 161, HDFL 432 or PSYC 602 and one course in biology or physiology. LEC
HDFL 710 Community Health and Development (3). Examines behavioral science principles and their application to community health and development. Emphasis is placed upon understanding and improving personal and environmental factors that affect health and development. Examines concepts and methods for prevention and building community capacities to address health concerns such as substance abuse, adolescent pregnancy, and violence. Prerequisite: An introductory social science course. LEC
HDFL 716 Experimental Problems in Community Settings (1-5). (No more than 10 hours total.) Research in the experimental design and analysis of community settings. Prerequisite: Consent of instructor. LEC
HDFL 718 Determinants of Infant Development: _____ (3). A seminar devoted to a review of current data concerning the variables that affect the early developmental process. May be taken more than once as long as repetitions involve different subtopics. Prerequisite: HDFL 160, HDFL 161, or HDFL 432. LEC
HDFL 719 Experimental Field Work in Community Settings (1-5). (No more than 10 hours total.) Instruction in the methods and techniques of the experimental design and analysis of community settings through supervised participation in established research programs; an emphasis on the techniques of gathering original experimental data. Prerequisite: Consent of instructor. RSH
HDFL 721 Biological Bases of Mental Retardation (4). A course dealing with the biological substrates of mental retardation. Retardation is classified and studied by medical syndromes rather than by behavioral patterns, but behavioral peculiarities are presented where relevant. Attention is directed to both genetic causes such as the chromosomal anomalies including Mongolism and the molecular and metabolic errors including phenylketonuria as well as to the environmentally produced retardation such as nutritional deficiency, prenatal rubella, and brain trauma. Prerequisite: One course in biology or equivalent. LEC
HDFL 722 Special Problems of Preschool Children and Teachers (1-6). This course is designed to better equip nursery school teachers (and others working with young children) to create an environment in which children are maximally likely to learn and develop along intellectual, social, and personal dimensions. It emphasizes techniques that focus on the behaviors and attitudes of adults toward young children in preschool settings. Prerequisite: HDFL 160, HDFL 161, or HDFL 432, or concurrent with working in a preschool setting. RSH
HDFL 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. Prerequisite: Consent of instructor. LEC
HDFL 724 Topics in Children’s Learning: _____ (3). A seminar devoted to topics related to the learning process, intellectual, and cognitive development. May be taken more than once as long as repetitions involve different subtopics. Prerequisite: HDFL 160, HDFL 161, or HDFL 432. LEC
HDFL 725 Topics in Research in Child Development: _____ (3). An advanced course in research with children that allows the student to concentrate his or her study upon selected research problems or research technique and to carry out independent research projects. May be taken more than once as long as repetitions involve different subtopics. Prerequisite: HDFL 160, HDFL 161, or HDFL 432 and HDFL 308 or HDFL 309. RSH
HDFL 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 developmental processes. Prerequisite: Introductory human development, psychology, or biology course. LEC
HDFL 735 With-In Subjects Research Methodology and Direct Observation (3). A graduate level introduction to the logic of experimentation, direct observation, and research strategy. Prerequisite: Graduate standing in the developmental and child psychological sciences. LEC
HDFL 740 Systems and Methods of Observing Children’s Behavior (3). The course will focus on the different systems and methods available for collecting, analyzing, and interpreting data dealing with children’s behavior in natural and contrived settings. Emphasis will also be placed on different theoretical orientations and associated methodological approaches across different components of development (physical, social, psychological, emotional, etc.). Prerequisite: Graduate status in educational psychology and research, human development, or psychology; equivalent experience for seniors. LEC
HDFL 741 Readings in Gerontology (3-5). Supervised readings in topical areas of gerontology. A program of study, conferences, and reports will be developed by the instructor and student for each enrollment. Prerequisite: Consent of instructor. RSH
HDFL 742 Research in Gerontology (1-10). Original investigations of some unsolved problems relating to adult development and aging. Prerequisite: Graduate standing in human development or consent of instructor. RSH
HDFL 750 Research in Behavioral Biology and Neurochemistry (1-10). Laboratory work devoted to the experimental analysis of various molecular interactions in the central nervous system and their relationship to specific behavioral patterns. These investigations will include the study of CNS protein chemistry, enzyology, and neurotransmitter functions under basal conditions and during the elaboration of certain behaviors. This course to be taught each semester. Prerequisite: Background in chemical and biological sciences. RSH
HDFL 756 Philosophical Bases of Early Childhood Education (3). This is the graduate and upper-division course of HDFL 456, Seminar
in the History and Philosophy of Preschool Education. A survey of lit-
erature on historical and current theories of education for the
preschool child, designed to prepare students for the study of HDFL 456.
LEC HDFL 760 Systematic Analyses of Behavior I (3-3). A continuing ex-
amination and development of the methods of the analysis of behavior.
May be repeated. Prerequisite: Consent of instructor. LEC HDFL 765 Evaluating and Disseminating Scientific Material I (1-3).
Intensive training in the evaluation and production of scientific crit-
tiques and reviews on current issues in the analysis of behavior, as dis-
seminated through media. May be repeated. Prerequisite: Consent of
instructor. LEC HDFL 771 Experimental Research in Community Settings (3). An ad-
vanced course in the experimental design and analysis of community
settings that allows the student to concentrate his or her study upon
selected experimental problems or research techniques and allows him
or her to carry independent research projects. Prerequisite: Con-
sent of instructor. LAB HDFL 780 Field Instruction in Research (1-10). On-site experience
in research provided under the supervision of departmental faculty
and qualified family life or consent of instructor. LEC HDFL 781 Field Instruction in Training (1-10). On-site experience in training paraprofessionals or students provided under the supervision of
departmental faculty and qualified professionals in a training organi-
zation. Special attention given to selecting and supervising personnel, budgeting for research and training. Designed to give students supervised practical experience in conducting professional activities in real life situations. Frequent meetings with faculty in solving practical problems and relating experiences to
course work. Prerequisite: Major in human development and family
life or consent of instructor. LEC HDFL 782 Field Instruction in Applied Research Administration (1-
10). On-site experience in administering applied research programs
provided under supervision of departmental faculty and qualified pro-
fessionals in research or training organization. Special attention given
to selecting and supervising personnel, budgeting for research and training. Designed to give students supervised practical experience in conducting professional activities in real life situations. Frequent
meetings with faculty will assist students in solving practical problems
and relating experiences to course work. Prerequisite: Major in human
development and family life or consent of instructor. LEC HDFL 783 Field Instruction in Child Care (1-10). On-site experience
providing direct services to children under supervision of departmental
faculty and qualified professionals in service-delivery organization.
Emphasis given to determining appropriate goals of child care and
study of interaction patterns between children and child-care person-
nel. Frequent meetings with faculty in solving practical problems and
relating experiences to course work. Prerequisite: Major in human de-
velopment and family life or consent of instructor. LEC HDFL 787 Gerontology Proseminar (3). A proseminar coordinated by
the Gerontology Center. The proseminar explores essential areas of
gerontology for researchers and practitioners, providing a multidisci-
plinary (psychology, biology, sociology, and communication) percep-
tive on aging. The proseminar surveys contemporary basic and applied re-
search, service programs, and policy and management issues in geron-
tology. (Same as ANS 787, COSM 787, PSYC 787, and SOC 787) LEC HDFL 787 Practicum in Educational Psychological Rehabilitation Ser-
vices: ____ (3-4). This course is to serve students who wish to com-
plete practicum experiences in services related to persons with retard-
tion, 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 opportuni-
ties to work with professionals in these programs on a semester or sum-
er semester basis. The course will consist of participation in professional activities associated with the practicum program and a report of these activi-
ties to the instructor. Prerequisite: Consent of instructor. LEC HDFL 790 Special Practicum for Allied Professionals (2-6). Profes-
sionals in fields such as journalism, social welfare, psychology, etc.,
may have career interests that include work with or in behalf of young
children. This practicum is individualized to provide a student with
the opportunity to work with young children in a group setting in order to extend his or her professional skills. Prerequisite: Consultation with in-
structor in advance. LEC HDFL 791 Practicum I: Group Care of Young Children (1-5). A course covering the specifi-
cation of learning goals, implementation and evaluation of curriculum design management of groups of young children. May be repeated more than once up to a total of five hours. Prerequi-
site: Concurrent teaching with a group of young children, human de-
velopment and family life major, and consultation with instructor. LEC HDFL 792 Practicum II: Individual Children Environ-
ments (1-5). A course to assess and teach skills in diagnosis and evalu-
ation of particular problems of young children (1-5 years of age), and to design and implement interventions. May be repeated more than once up to a total of five hours. Prerequi-
site: Concurrent work with individual children, human development and family life major, and consultation with instructor. LEC HDFL 793 Practicum III: Services to Child-Care Consumers, Providers, and Related Agencies (1-5). Experiences in understanding and developing parent satisfaction with care arrangements for their child(ren), providing services to personnel responsible for care and
development of young children, and/or maximizing use of available services for young children in their behalf. May be repeated to a max-
imum of five hours. Prerequisite: Participation in an appropriate train-
ing, human development and family life major, and consultation with instructor. LEC HDFL 794 Practicum with Handicapped Children (1-5). Laboratory teaching in an early childhood classroom that includes children who
are developmentally delayed, demonstrate behavioral or learning diffi-
culties 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 more than once to a total of 5 credit hours. Prerequisite: Concurrent with Early Childhood Sequence. Consultation with instructor. LEC HDFL 795 Practicum in Supervision: Early Childhood Programs (1-
5). Experience in supervising staff in work in programs for young
children. Supervision includes observing, orienting, and evaluating
staff performance, opportunities for interaction with other profession-
als, experience in facilitating staff communication and consulting on re-
search projects. Prerequisite: HDFL 791 and concurrent placement in an early childhood program approved by Child Development Labora-
ory faculty. LEC HDFL 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. The principles and procedures have special relevance to analogous processes in child development, both normal and deviant. Prerequisite: Consent of in-
structor. LAB HDFL 797 Proseminar in Child Language (2). A review and discussion of current issues in children’s language acquisition. May be repeated for credit. Students will be graded S/F. (Same as LNG 799, PSYC 799 and SPLH 799). LEC HDFL 798 Behavioral Concepts and Content: The Analysis of Behav-
ior I (3). An introductory graduate course on the history and philoso-
phy of behavior analysis, with a special emphasis on basic concepts and
theories, and their application to the various domains of behavior (e.g. perception, emotion, language, cognition). The relationships be-
tween behavior analysis and other psychological concepts and theories
are also addressed, as are the major disciplinary and professional is-
sues currently facing the field. Prerequisite: HDFL 796 or consent of
instructor. LEC HDFL 799 Advanced Topics in Child Development: ____ (3-6). A course offering detailed discussion of complex processes in child development, with special emphasis on applications and alternative theoretical ac-
tounts of child development. Prerequisite: Consent of instructor. LEC HDFL 800 Research in Community Development (1-10). Original investiga-
tions of some unsolved problem relevant to child development in HDFL 801 Design and Analysis of Community Development Meth-
ods (3-3). A continuing examination of principles and practices of com-
unity development and evaluation of methods used to promote com-
unity improvement. No more than a total of twelve combined hours of credit in HDFL 801 and HDFL 802 may be earned and applied to-
wards a master’s degree. Prerequisite: Consent of instructor. LEC HDFL 802 Practicum in Community Development (3-5). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community improvement projects and their evaluation. No more than a total of twelve combined hours of credit in HDFL 801 and HDFL 802 can be earned and applied towards a master’s degree. Prerequisite: Consent of instructor. LEC HDFL 803 Experimental Child Study (3). A graduate level introduc-
tion to general problems of research with children. Emphasis will be
upon the logic of experimentation (as contrasted to that of survey and
analytical modes of study) and upon both single subject and group-
factorial experimental designs. Examples of experimental child re-
search from a variety of areas within child study will be examined both for design and content. This course is intended as one of the early re-
cquired courses of the joint Ph.D. program in developmental and child
psychology. Prerequisite: Graduate standing in the developmental and child psychology program, or consent of instructor. LEC HDFL 804 Research in Community Health Promotion (1-5). Super-
vised, original investigations of problems relevant to community
health, such as the prevention of drug abuse or cardiovascular disease.
As appropriate, the course will be focused on any combination of: Iter-
The Research and Training Center for Independent Living studies and develops self-advocacy and independent living systems for persons of all ages who have developmental disabilities.

Twenty-four KU students have become Rhodes Scholars since the program began.
lecture, discussion, and course assignments. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 840 Theoretical Concepts of Human Development and Child Care Practice (3). A practicum course designed to provide students with theoretical and practical experience in working with elders in home, community, or institutional settings. Prerequisite: Consent of instructor. LEC

HDFL 841 Legal and Ethical Issues in Human Development and Child Care (3). Values of child advocacy, human rights, and the ethical considerations surrounding human development and child-care methods. Legal issues inherent in institutional settings and community-based facilities. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 842 Seminar in Child, Adolescent and Human Development (3). New areas of research concerned with developmental issues surrounding child-parent relationships, the need for independence, and effective treatment procedures. Procedures effective in reducing institutionalization and recidivism. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 843 Practicum and Evaluation in Human Development and Child Care (3). Supervised practical experience in a human development or child-care setting. Opportunity for students to learn about the operation of a typical program. Regular individual and staff conferences with faculty to evaluate student progress. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 844 Advanced Practicum and Evaluation in Human Development and Child Care (3). Supervised practical experience in a human development or child-care setting. Opportunity for students to assume responsibility for the operation of a typical program. Regularly scheduled individual and staff conferences with faculty to evaluate student progress. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 845 Rules of Evidence for Applied Research (3). A course on experimental problems specific to research on socially significant behaviors of humans. Emphasis on editing and critiquing research articles of the type submitted for publication in applied research journals. LEC

HDFL 846 Practicum in Clinical Child Psychology (1-3). Lecture, laboratory, field work, and supervision appointed. Psychological evaluation and treatment of children and their families; supervised, progressive experience in psychological interventions in clinical child psychology. Graded on satisfactory/fail basis. (Same as PSYC 846) Prerequisite: HDFL 812 or PSYC 812, and PSYC 850, or consent of instructor. LEC

HDFL 847 Practicum in Clinical Child Psychology II (1-3). A continuation of HDFL 846/PSYC 846. Graded on satisfactory/fail basis. (Same as PSYC 847) Prerequisite: HDFL 846 or PSYC 846, or consent of instructor. LEC

HDFL 848 Applied Gerontology: Practice 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 will be examined. LEC

HDFL 849 Advanced Practicum in Gerontology (1-5). Supervised practical experience in working with elders in home, community, or institutional settings. Regular individual conferences with faculty to evaluate student progress. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 850 Behavioral Consultation with Group Home Staff (3). This course is designed to provide students with a conceptual framework and supervised practical experience in behavioral consultation for child-care staff in group home treatment settings. Emphasis is to be placed on behavioral observation, measurement, and report presentation. Prerequisite: Consent of instructor. LEC

HDFL 851 Research in Development of Adult Behavior (1-5). Supervised, original investigations of unsolved problems in the development of adult behavior. Will provide opportunities to obtain research experience prior to thesis research, or may be taken concurrently with thesis research. Prerequisite: Consent of instructor in behavior treatment programs. Prerequisite: Consent of instructor. LEC

HDFL 852 Directed Readings in Adult Development (1-5). Supervised readings in topical areas that are not covered in other courses and seminars. A program of study, conferences, and reports will be developed by the instructor and student. Prerequisite: Consent of instructor. LEC

HDFL 853 Practicum in Consumer Evaluation of Behavior Programs (3). A practicum course designed to provide students with the knowledge, background, and practical experience in the conduct of consumer evaluations for behavior treatment programs. Prerequisite: Consent of instructor. LEC

HDFL 870 Cognitive Development (3). A lecture/discussion course in cognitive development. The course will contrast the theory and research of Jean Piaget and his followers, with an information processing or cognitive psychology approach to issues. Topics include development of perception, attention and information getting; memory and metacognition; problem solving; discrimination learning and concept formation; and individual differences in cognitive styles and strategies. (Same as PSYC 870) Prerequisite: A course in child psychology or development, a course in cognitive psychology, or consent of instructor. LEC

HDFL 871 Applied Behavior Analysis (3). A course on the application of behavioral principles and methods to address societal problems and goals. The seminar will consider the methods commonly employed in behavioral interventions and will investigate, in detail, the procedures, assumptions, and implications involved in those methods. Topics will include processes such as problem analysis and design of interventions, and will extend to advanced topics and procedures such as behavioral observation, data analysis, program development, evaluation, and ethical considerations. Students may use examples from their applied research projects as topics for most of the exercises in the course. LEC

HDFL 872 Attention, Perception, and Learning in Infancy (3). Coverage of the basic literatures on perceptual-cognitive behaviors in the first three years of life, as assessed by measures of attention, perception, learning, and memory. Course material is approached from an information-processing framework. (Same as PSYC 872) LEC

HDFL 873 Practicum in Behavior Analysis: (1-6). Instruction and supervised laboratory or field work. Practica will be offered by different instructors on different topics and a student may take more than one topic. Topic and instructor will be announced in the Timetable of Classes. Prerequisite: Graduate standing in human development or consent of instructor. LEC

HDFL 880 Social Development (3). A lecture/discussion course in social development. Topics include theoretical approaches to the study of social development, family processes, peer relations, social development of aggression and prosocial behavior, child abuse and neglect and family violence, child care, and the media. (Same as PSYC 880) Prerequisite: A course in child psychology or development. LEC

HDFL 888 Applied Behavior Analysis in Complex Organizations (3). An examination of the theory, principles, and methods of behavior analysis and their applications to problems of human behavior in complex organizations such as businesses, industries, human service organizations, and governments. Prerequisite: Graduate standing or consent of instructor. LEC

HDFL 891 The History and Systems of Psychology (3). An advanced graduate seminar on the history of psychology and its theoretical systems, and their relationship to contemporary psychology. Pertinent issues in the history and philosophy of science are addressed (e.g., scientific revolution), as are current concerns in the historiography of psychology (e.g., internalist, presentist accounts). Prerequisite: Third year graduate standing or consent of instructor. LEC

HDFL 897 Master's Thesis in Clinical Child Psychology (1-10). Supervised research experience completing thesis leading to master's degree. (Same as PSYC 897) LEC

HDFL 899 Master's Thesis (1-10). RSH

HDFL 900 Research in Child Development (1-10). Original investigations of some unsolved problem relating to child development. RSH

HDFL 901 Seminar: (3). Each seminar will examine the literature and research methods of a specialized field of human development and social behavior. Topic and instructor will be announced in the Timetable. Seminars will be offered by different instructors on different topics and a student may take more than one topic. LEC

HDFL 902 Problems of the Preschool Child (1-3). A laboratory course in research on problems of the preschool child with emphasis on behavioral modification studies of personal-social and preacademic skills behavior. Data discussion section meets weekly. Laboratory coincident with preschool sessions. May be taken more than once up to a total of 8 credits. RSH

HDFL 903 Observational and Analysis Techniques in the Study of Human Behavior (1-3). Discussion and reports of current problems in the observation, recording, and analysis of human behavior. The purpose of this seminar is to discuss potential bases for these current problems and to implement these prescribed solutions in current research of the students. Prerequisite: Graduate standing. LEC

HDFL 905 Family Life Research Studies (2). A survey and critical evaluation of selected research studies in the fields of marriage and family relationships. Prerequisite: General psychology, elementary sociology, marriage and family relationships, and consent of instructor. LEC

HDFL 906 Research in Community Life (1-10). Original investigations of some unsolved problem relating to community life. RSH

HDFL 907 Research in Nutrition (1-10). Original investigations of some unsolved problem relating to nutrition. RSH

HDFL 908 Psychotropic Drugs: Effects Through the Life Span (3). This course addresses basic pharmacological concepts (i.e., assimilation, distribution, elimination, dose effect analyses, etc.), neuropharmacological principles (i.e., neuronal mechanisms of action of psy-
chotic drugs, etc.), and therapeutics (i.e., drug treatment of psychosis, depression, Alzheimer’s disease, etc.). Special attention is devoted to the organism’s role in adult development in these and other areas. This may influence psychopharmacological outcomes. LEC

HDFL 910 Seminar in Foods and Nutrition (3). Discussion of and reports on current literature related to foods and nutrition. LEC

HDFL 912 Proseminar in Experimental Community Research (1-3). A prosemimar devoted to presentation of research proposals and accomplishments. Speakers are drawn from community life and related staff, visiting scientists, and from graduate students. Prerequisite: Graduate standing in community life or consent of instructor. LEC

HDFL 913 Developmental Research Proseminar (1-5). A prosemimar, conducted jointly by the staffs of the developmental and child psychology Ph.D. training program. This course will meet weekly to hear presentations of research proposals and accomplishments in the area of developmental psychology. Speakers will be drawn from the staffs of the two departments, from visiting scientists, and from the graduate students enrolled in the program. The prosemimar will present both the current research areas of importance in developmental psychology and the students’ and staffs’ own research as related to such areas. (Same as PSYC 913.) Prerequisite: Graduate standing in the developmental and child psychology program or consent of instructor. LEC

HDFL 915 Issues and Methods in Behavioral Biology and Neurochemistry (1-3). New techniques and methods in the fields of neurochemistry, neurophysiology, and behavioral biology will be presented and critically analyzed. This course to be taught fall semester. Prerequisite: Consent of instructor. LEC

HDFL 916 Concepts in Brain Research (1-3). This course will involve the examination of both the theoretical and methodological aspects of the multidisciplinary approaches to the area of brain research. This course to be taught spring semester. Prerequisite: Consent of instructor. LEC

HDFL 917 Biobehavioral Plasticity and Development (3). A course on developmental malleability in human and infrahuman behavioral systems, with an emphasis on the biological and physiological mechanisms underlying this malleability. The course includes a review of general concepts involved with early experience effects, coverage of specific lasting effects of early stimulation and deprivation on the central nervous system, and those physical changes in the central nervous system that are responsible for this malleability. Prerequisite: A course in biopsychology or consent of instructor. LEC

HDFL 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 SPLH 966.) LEC

HDFL 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. (Same as PSYC 921.) LEC

HDFL 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 experience in the course of the development of children. (Same as PSYC 923.) LEC

HDFL 925 Seminar in Experimental Analysis of Abnormal Development (3). A seminar examining the promise of current techniques of behavior modification as applied to examples of deviant development, with discussions of the implications of such an approach for prevention and normal development. Prerequisite: Consent of instructor. LEC

HDFL 928 Seminar in Recent Advances in Child Behavior and Development (1-3). A seminar devoted to presentations of research devoted to an examination of the contents of the yearlybook, Recent Advances in Child Behavior and Development. Prerequisite: Advanced graduate standing and consent of instructor. LEC

HDFL 930 Seminar in Human Development: _____ (1-3). This seminar is designed to provide the advanced student an opportunity for intensive study of selected problems in human development. May be taken for two semesters. Prerequisite: HDFL 701 or equivalent. LEC

HDFL 931 Advanced Topics in Behavior Analysis: _____ (1-4). An advanced graduate seminar on the history, philosophy, concepts, principles and/or application of behavior analysis. In-depth coverage is offered on theoretical and empirical issues pertaining to the history and philosophy of the science of behavior, the experimental analysis of behavior, and applied behavior analysis. Primary source materials are emphasized throughout. May be repeated under different subtitles. Prerequisite: Consent of instructor. RSH

HDFL 933 Directed Readings in Child Development (3-5). Designed to meet the needs of advanced students whose study in child development cannot be met with present courses. RSH

HDFL 934 Directed Readings in Community Life (3-5). Designed to meet the needs of advanced students whose study in the family cannot be met with present courses. RSH

HDFL 940 Measurement and Experimental Design for Applied Research (3). An advanced course on research problems specific to program development, evaluation, and dissemination. Problems of measurement, assessment of change, reliability, social validity, and identification of functional variables are considered. Prerequisite: HDFL 735 (HDFL 803, HDFL 796, and consent of instructor. LEC

HDFL 941 Teaching and Conference (3-4). This course will be used by graduate students fulfilling the teaching requirements in the developmental and child psychology Ph.D. program. The student will act as a discussion section leader or a laboratory course supervisor. Student will meet regularly with the faculty member he or she is assisting. Prerequisite: Graduate standing in the developmental and child psychology program. FLD

HDFL 942 Techniques of Data Analysis for Applied Research (3). A course which will examine descriptive analysis procedures commonly used with both large group and single subject experimental designs. In addition to presenting specific data analysis techniques, strengths and weaknesses inherent in the various techniques will be carefully reviewed and evaluated. Prerequisite: HDFL 735 or HDFL 803 and an intermediate statistics course. LEC

HDFL 943 Advanced Practicum in Clinical Child Psychology (1-3). Lecture, laboratory, field work, and supervision. Advanced psychological intervention techniques for children, youth, and families; supervised progressive experience in application of behavioral and psycho-therapeutic methods to behavioral and emotional problems. Graded on satisfactory/fail basis. (Same as PSYC 943.) Prerequisite: HDFL 846 or PSYC 846, and HDFL 847 or PSYC 847, or consent of instructor. FLD

HDFL 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of HDFL 943. Graded on satisfactory/fail basis. (Same as PSYC 944.) Prerequisite: HDFL 943 or PSYC 943, or consent of instructor. FLD

HDFL 947 Advanced Practicum in Clinical Child Psychology V (1-3). A continuation of HDFL 944. Graded on satisfactory/fail basis. (Same as PSYC 947.) Prerequisite: HDFL 944 or PSYC 944, or consent of instructor. FLD

HDFL 951 Advanced Research in Development of Adult Behavior (1-10). Supervised, advanced, original investigations of unsolved problems in the development of adult behavior. Will provide opportunities to obtain additional research experience prior to or concurrently with dissertation research. As deemed appropriate by the instructor, the course can be focused on any combination of literature research, research planning and preparation, conducting research, analyzing data, writing research reports, or preparing oral reports of completed research. RSH

HDFL 952 Advanced Directed Readings in Adult Development (1-5). Supervised readings in topical areas that are not covered in other courses and seminars. A program of study, conferences, and reports will be developed by the instructor and student for each enrollment. Prerequisite: Consent of instructor. RSH

HDFL 960 Systematic Analyses of Behavior II (1-3). A continuing examination and development of the methods of the analysis of behavior. May be repeated. Prerequisite: Consent of instructor. LEC

HDFL 962 Clinical Child Psychology Internship (1). Three consecutive enrollments, covering two of eleven weeks in the course of an approved clinical psychology field setting; supervision by qualified clinical child psychology faculty and field staff clinicians. Required of all clinical child psychology program students. Intensive guided experience in application of clinical child psychology theory, methods, and practices. Integrates scientific and clinical aspects of field. (Same as PSYC 963.) Prerequisite: Completion of Ph.D. comprehensive examinations and consent of clinical child psychology faculty. FLD

HDFL 965 Evaluating and Disseminating Scientific Material II (1-3). Intensive training in the evaluation and production of scientific critiques and reviews on current issues in the analysis of behavior, as disseminated through media. May be repeated. Prerequisite: Consent of instructor. LEC

HDFL 971 Seminar in Applied Behavior Analysis: _____ (3). An advanced seminar on applied behavior analysis. Each seminar will examine the literature and research methods of a specialized area of applied behavior analysis (e.g., developmental disabilities, community health, organizational development). Topic and instructor will be announced in the Timetable of Classes. Seminars will be offered by different instructors on different topics and a student may take more than one topic. LEC

HDFL 998 Doctoral Dissertation in Clinical Child Psychology (1-10). Research experience making original contribution to literature in clinical child psychology. (Same as PSYC 998.) RSH

HDFL 999 Doctoral Dissertation (1-10). RSH

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 550 Classics of Peace Literature (3).
HWC 555 Topics in Peace and Conflict Studies: _____ (3).
HWC 560 Directed Study in Peace and Conflict Studies (1-3).
HWC 565 The Literature of Human Rights (3).
HWC 566 The Devil in Russian Literature (3).
HWC 600 Biography of a City: _____ (3).
HWC 620 Study of a Culture: _____ (3).
HWC 650 Senior Seminar in Peace and Conflict Studies (3).

Indigenous Nations Studies
Chair: Donald L. Fixico, insp@ku.edu
Lippincott Hall, 1410 Jayhawk Blvd., Room 105
Lawrence, KS 66045-7515, www.ku.edu/~insp
(785) 864-2660, fax: (785) 864-0370
Professors: Crawford, Fixico, Nagel, Pye, Rankin, Yamamoto
Associate Professors: Hirsch, Hofman, Hoopes, Napier, O'Brien, Pierotti
Assistant Professors: Dean, Herlihy, Pewewardy
The 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 train candidates to assume leadership and policy-making roles in indigenous communities, in higher education, and in state, national, and international institutions and organizations. Indigenous Nations Studies collaborates with other departments and programs, including the Center of Latin American Studies, the Tribal Law and Government Center in the KU School of Law, and Haskell Indian Nations University. The master’s degree program consists of three core courses and four tracks of study from which one is to be chosen: General Studies, Museum Studies, Sovereignty Development Studies, or Linguistics and Language Teaching Studies.

Admission
Admission requires (1) a baccalaureate degree or the equivalent (for international students), (2) a grade-point average of at least 3.0 on a 4.0 scale, and (3) acceptance by the Graduate School. The application deadline is no later than three months before the desired date of enrollment.
Submit the following application materials:
1. Domestic (or international) graduate student application.
2. Application fee (nonrefundable check payable to the University of Kansas, see page 195).
3. Two official transcripts for all previously completed college work.
4. Graduate Record Examination scores. International students should submit Test of English as a Foreign Language scores.
5. Three letters of recommendation.
6. A two- to three-page personal statement of background and academic and career goals.
7. Writing sample (research paper, etc.).
8. Résumé.

Files remain incomplete without these materials.
Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements
Students pursuing the M.A. in Indigenous Nations Studies must complete a minimum of 30 to 33 credit hours at the graduate level. Required core courses are INS 801, INS 803, and INS 808.
Fifteen to 18 credit hours are to be completed in the student’s designated study track. The program offers four study tracks (up to two courses can be taken from another track, with approval):
• General Studies (15 credit hours)
• Linguistics and Language Teaching Studies (18 credit hours)
• Museum Studies (18 credit hours)
• Sovereignty Development Studies (15 credit hours)
Students who elect to write a master’s thesis must complete 6 credit hours of thesis research and writing. The thesis must be successfully defended in an oral examination. A nonthesis option is available, requiring course work in lieu of thesis research. Nonthesis-option students must either complete 6 credit hours of classroom instruction, of which 3 are normally in research methods appropriate to the study track, or a supervised apprenticeship in an approved organization or setting related to indigenous peoples of the Americas. Students who take the apprenticeship must submit a written report of their experiences.
Depending on the track, the degree program must include at least one research methods course. Course work must include a significant majority (60 percent or more of all course work completed) of courses at the 700 level or above.
Examinations. A final general examination is required of all candidates for the Master of Arts in Indigenous Nations Studies. At the option of the program, this examination may be oral or written or partly oral and partly written. Master’s examinations are administered by a committee of at least three members of the Graduate School faculty. In this program, a thesis defense does not take the place of the required general examination. Thesis. A master’s thesis is optional but recommended for students planning to pursue a Ph.D. The thesis consists of original research conducted by the student with a thesis supervisor and two other INS program faculty members on the thesis committee. Upon completion, the student defends the thesis before the committee.
Core Curriculum. All INS students must take the following core courses:
INS 801 Indigenous Peoples of the World ......................................... 3
INS 803 Issues Facing Indigenous Peoples of the Americas ................. 3
INS 808 Administrative Skills and Leadership .................................. 3
The courses provide basic awareness of the indigenous peoples of the Americas, past and present, upon which students build specialized knowledge in one of the program’s concentrations. The four focused study tracks each have additional track core requirements. General Studies Track (15 credit hours). This track helps students develop critical thinking and understanding of the cultural, economic, environmental, political, and social needs of indigenous people. Course offerings reflect diverse perspectives, as well as methodological and theoretical foundations, relating to the indigenous peoples and cultures of the Western hemisphere.

This track offers flexibility in choosing course work. Students interested in examining how a specific social or community need or issue (e.g., education, poverty, social welfare) affects indigenous peoples should select this track. Students interested in pursuing a dual degree or combining this degree with Ph.D. work may find this the most appropriate track.

Students must choose five courses from at least four of the disciplines listed below:

Prehistory. One course (3 credit hours) from the following:
- ANTH 504 North American Archaeology (3)
- ANTH 505 Prehistory of Eastern North America (3)
- ANTH 506 Ancient American Civilizations: Mesoamerica (3)
- ANTH 508 Ancient American Civilizations: The Central Andes (3)
- ANTH 510 An Introduction to Southwestern Archaeology (3)
- ANTH 541 Physical Anthropology of American Indians (3)
- ANTH 545 The Colonial Experience (3)
- ANTH 715 Seminar in Plains Archaeology: _____ (3)
- ANTH 718 Seminar in Latin American Archaeology: _____ (3)
- ANTH 775 Seminar in Cultural Anthropology: Visual Archaeology (3)
- ANTH 785 Doing Ethnography (3)
- ANTH 849 Seminar in Archaeology: The Paleolindian New World (3)

Linguistics and Language Teaching Studies Track (18 credit hours). The training in this study track provides theoretical as well as practical and hands-on experience in the development of curriculum and materials for indigenous language teaching. Native speakers learn how to develop professional teaching materials for their language programs at schools and within communities. The curriculum in this track provides the foundation necessary to evaluate a community’s language situation, form a team of language planners, formulate an action plan to meet challenges of language revitalization, and implement and evaluate the plan. The ultimate goal is to train language teachers who in turn will produce a new generation of speakers who bring life to the ancestral languages of indigenous peoples.

Each degree candidate must serve a supervised apprenticeship with an indigenous language program or a teacher training institute. The internship covers a four-week period either consecutively or in intervals. Students are involved in the actual teaching of a language if appropriate, developing curriculum units and/or lesson plans, developing language teaching materials, training language teachers, designing a language program, evaluating the effectiveness of a program, teaching methods and techniques, or language materials. Students must be enrolled in INS 708 Internship in Indigenous Nations Studies while serving their internships.

Required Courses (12 hours). All students must take these courses:
- LING 709 Introduction to Linguistic Science (3)
- T&L 815 Methods of Teaching English as a Second Language/Bilingual Education (3)
- T&L 816 Diagnosis and Remediation in Second Language Education (3)

Electives (9 hours). With advising, 9 credit hours of electives must be taken from each of the following three categories. Some other courses may be used to satisfy these electives, with permission of the graduate program director and/or advisers.

Elective Category 1: Second Language Acquisition (6 credit hours). This track trains professionals for positions in institutions responsible for collecting and caring for the material record of the natural and cultural world; for studying these collections to create new knowledge; and for sharing the results of these activities through exhibit and public educational procedures. As indigenous nations continue their efforts at self-determination, the need to provide for care of cultural patrimony arises.

For this track, each degree candidate must serve a supervised apprenticeship in an approved museum or historical agency, full time for one semester or half time for two semesters, for a total of 6 semester hours of credit. Approximately 500 hours of apprenticeship experience is expected. Students must be enrolled in one of the following while serving their apprenticeships: AMS 799, ANTH 799, BIOL 799, or HIST 799. Opportunities may be available to receive pay for this experience, and students may serve longer apprenticeships if they wish. Students must present a paper, with a related bibliography, describing and critically analyzing their apprenticeship experiences. Students in this track are not expected to complete a thesis, given the length of the apprenticeship, but are encouraged to do so if interested.

Museum Studies Track (18 credit hours). This track trains professionals for positions in institutions responsible for collecting and caring for the material record of the natural and cultural world; for studying these collections to create new knowledge; and for sharing the results of these activities through exhibit and public educational procedures. As indigenous nations continue their efforts at self-determination, the need to provide for care of cultural patrimony arises.

For this track, each degree candidate must serve a supervised apprenticeship in an approved museum or historical agency, full time for one semester or half time for two semesters, for a total of 6 semester hours of credit. Approximately 500 hours of apprenticeship experience is expected. Students must be enrolled in one of the following while serving their apprenticeships: AMS 799, ANTH 799, BIOL 799, or HIST 799. Opportunities may be available to receive pay for this experience, and students may serve longer apprenticeships if they wish. Students must present a paper, with a related bibliography, describing and critically analyzing their apprenticeship experiences. Students in this track are not expected to complete a thesis, given the length of the apprenticeship, but are encouraged to do so if interested.

The Master of Arts in International Studies is designed for business executives, educators, military personnel, journalists, bankers, attorneys, activists, and other professionals who need an analytically sophisticated understanding of the contemporary global arena.

A Master of Arts degree is offered in Museum Studies. See the Museum Studies listing in this chapter of the catalog.
INDIGENOUS PEOPLES

Indigenous Nations Studies Program

The Indigenous Nations Studies (INS) program provides graduate study focused on the history, cultures, economies, environments, and legal affairs of indigenous nations. Students explore how these factors have shaped the world today. The program prepares students for careers in government, business, education, legal practice, consultancy, and more. For more information, contact INS, Wescoe Hall, 1445 Jayhawk Blvd., Room 2013 Lawrence, KS 66045-7590, (785) 864-9118.

Indigenous Nations Studies Courses

INS 601 American Indian Leadership (3).
INS 602 Indigenous Peoples of the World (3). A survey of the native peoples of the world at the time of contact with Europeans. For more information, contact the Indigenous Nations Studies office.

Indigenous Nations Studies Courses

INS 601 American Indian Leadership (3).
INS 602 Indigenous Peoples of the World (3). A survey of the native peoples of the world at the time of contact with Europeans. The course examines the development of indigenous nations in the Western Hemisphere.LEC
INS 603 Issues Facing Indigenous Peoples of the Americas (3). This seminar is normally team taught and explores in depth the theories and methods of selected socio-economic, political, legal, environmental, and cultural issues confronting indigenous societies throughout the Americas. LEC
INS 604 Special Topics: (1-3). Designed to fulfill program needs of the Indigenous Nations Studies master’s program, this course may meet with appropriate professional or graduate courses. Can be repeated for credit when topic differs. LEC
INS 605 Directed Readings (1-3). An individual readings course with a qualified instructor on a topic in Indigenous Nations Studies. LEC
INS 607 Internship in Indigenous Nations Studies (3-6). A hands-on experience resulting in a written paper or journal from working with an indigenous community, organization, tribal government, or government involving indigenous people. A minimum of 900 contact hours is expected (for each 3 credit hours) with supervision from an INS program faculty member and approval from the INS graduate student advisor. LEC
INS 608 Administrative Skills and Leadership (3). A preparation to train students in grant writing, leadership skills, conflict resolution, public presentation, and organization to assist Indigenous peoples in setting up programs. LEC
INS 609 Indigenous Women: Gender and Sexuality (3). This course examines gender and sexuality among Indigenous communities in the world. Ethnographies of Indigenous women are used to explore a variety of gender and sexual identities. Gendered and sexualized identities are analyzed within broader societal contexts such as the division of labor, kinship, marriage, household, and the control of resources. Power relationships are examined between subaltern women and the larger society, nation, and globalizing world in which they play a part. LEC

Interdisciplinary Studies Program

Coordinator: John Gronbeck-Tedesco

The College of Liberal Arts and Sciences offers degrees in several departments and programs that are interdisciplinary in nature. For information on these, see American Studies, East Asian Languages and Cultures, Genetics, Museum Studies, Indigenous Nations Studies, International Studies (KU Edwards Campus only), Latin American Area Studies, and Russian and Eastern European Studies in this chapter of the catalog.

Courses

See course listings for the various departments.

International Studies Program

Director: Ted Wilson. taw@ku.edu

See course listings for the various departments.
understanding of the contemporary global arena. Through an individualized interdisciplinary program, students gain knowledge of one or more geographical areas as well as an awareness of international issues that transcend national boundaries.

Admission
Potential students must submit an application form with the appropriate fee and a brief (500- to 1,000-word) essay outlining relevant experiences and indicating how the program meets their academic and professional needs. A complete application also includes three letters of recommendation (sent directly from the references) and two copies of all official undergraduate and graduate transcripts (sent directly from the institutions). All application materials must be received before the application can be evaluated. 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. Admission materials are reviewed by a subcommittee of the program advisory committee, which also considers the applicant’s overall record and prospects for success in the program.

Submit your application to the Graduate School online at [www.graduatedku.edu](http://www.graduatedku.edu). Forward all requested supporting application documents to
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements
Students must complete all requirements of the Graduate School and the College of Liberal Arts and Sciences as well as requirements of this program. The foundation of this degree is the six core courses (INTL 701, INTL 702, INTL 703, INTL 704, INTL 705, INTL 706), of which a student must take at least four.

In addition to the four core courses, a student must take three courses in each of two specialization tracks, complete a significant piece of original research, pass a comprehensive written examination, and provide evidence of current competence (equivalent of two years of successful college-level study) in a modern spoken and written language other than English. Students may choose to take two area studies tracks or one area studies track and one topical track. In general, these courses are taken from the existing curriculum offered on the Lawrence campus.

Area Studies Tracks. Area studies courses give students substantial knowledge of one or more geographical areas. Up to three language courses at or above the 500 level (9 hours) may count toward this requirement. In most cases, these tracks correspond to one of the area studies programs at KU.

- African and African-American Studies
- East Asian Studies
- European Studies
- Latin American Area Studies
- Russian and East European Studies

A student also may petition to enroll in courses under an adviser’s guidance in a coherent track 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 America Free Trade Agreement (Canada, Mexico, and the United States), the Middle East, South Asia, the Pacific Rim, or the Islamic world. This petition is granted only if the program committee and the director are assured that the student has a qualified academic adviser with expert knowledge of that area.

Topical Specialization Tracks. These courses develop a proficiency in one of three cross-regional themes. The courses listed are illustrative; each student works with an adviser to identify the most appropriate courses, given her or his career goals.

International Culture and Communications focuses on issues of culture, ethnicity, diversity, and trans-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:
- HWC 500 Studies in Comparative Literature
- JOUR 502 International Journalism
- SOC 626 Religion and Society
- TH&F 885 Development of the International Sound Film
- 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 674 Political Anthropology
- POLS 670 United States Foreign Policy
- POLS 673 International Organization
- POLS 774 International Law
- PSYC 571 Violence, Aggression, and Terrorism in the Modern World (Same as ANTH 571)
- SOC 672 Sociology of War and Peace
- T&L 705 International Issues in the K-12 Curriculum

International Business and Economics offers a foundation in global business and economics, economic history, and political economy. Sample courses:
- BUS 771 Global Marketing
- ECON 582 Economic Growth and Development
- ECON 835 Comparative Economic Systems
- HIST 509 Multinational Corporations: The Role of Money and Power
- HIST 528 Economic History of Europe (Same as ECON 528)
- SOC 530 Industrial Revolution and Capitalist Development

International Studies Courses
INTL 701 Approaches to International Studies (3). General introduction to graduate-level research in international studies. Topics will include basic philosophy of social science research, the relative merits of qualitative “small N” studies and quantitative “large N” studies, the roles of theories, models and data, how to choose a research topic, how to design a research project, case study methods, and an introduction to formal quantitative and qualitative techniques. Course readings will illustrate how different methods have been used in practice, as well as articles on the theory and methods of research. LEC

INTL 702 International Institutions and Processes (3). Consideration of foreign policy decision-making, international institutions (governmental and non-governmental), public and private international law, contemporary patterns of international conflict and cooperation, and the evolution of the international system in the twenty-first century. 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: _____ (3). 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. LEC

The following courses are cross-referenced as available to or recommended for students in International Studies:

- ANTH 545 Contemporary Health Issues in Africa
- ANTH 565 Popular Images in Japanese Culture, Literatures, and Films
- ANTH 567 Japanese Ghosts and Demons
- ANTH 571 Violence, Aggression, and Terrorism in the Modern World
- ANTH 704 Current Cultural Anthropology
- ANTH 730 Linguistics in Anthropology
- ANTH 775 Seminar in Cultural Anthropology:_____  
- ANTH 780 Social Organization
- ANTH 781 Symbolic Anthropology
- ANTH 785 Topics in Ethnology:______
- BUS 715 International Business Immersion Week
- BUS 759 International Finance
- BUS 771 Global Marketing
- EALC 530 Chinese Culture
- EALC 500 Topics in East Asian Languages and Cultures:_____
- EALC 596 Defining Japan:Marginalized Groups and the Construction of National Identity
- ECON 525 Managerial Economics, Honors
- ECON 534 Economic History of the Caribbean Region
- ECON 562 The Russian Economy
- ECON 583 Economic Issues of East Europe
- ECON 582 Economic Growth and Development
- ECON 583 Economic Issues of East Asia
- ECON 584 Economic Development of Latin America
- ECON 604 International Trade
- ECON 605 International Finance
- ECON 740 Theory of Economic Growth and Development
- ECON 750 The Theory of International Finance
- ECON 852 Comparative Economic Systems
- ECON 840 Microeconomic Issues in Development Economics
- ECON 844 Macroeconomic Issues in Development Economics
- ECON 851 The Theory of International Trade
- EURS 500 Seminar in European Studies
- EURS 503 Europe Today
- EURS 504 The European Union
- EURS 506 Culture and Politics of the Cold War in Western Europe
- EURS 508 Politics and Economics of Cultural Production in Western Europe
- EURS 510 Introduction to the Study of Southern European Societies
- EURS 516 Scandinavian Life and Civilization
- EURS 512 Irish Culture
- EURS 536 Economic Issues in Europe
- GEOG 552 Geography of African Development
- GEOG 591 Geography of Latin America
- GEOG 594 Geography of the former Soviet Union
- GEOG 595 Geography of Eastern Europe
- GEOG 596 Geography of China
- GEOG 791 Latin American Regions:_____  
- GEOG 794 Regions of the former USSR
- GEOG 796 European Regions:______
- GEOG 796 Asian Regions:______
- HIST 509 Multinational Corporations: The Role of Money and Power
- HIST 510 Topics in:_____  
- HIST 527 Recent European History, 1870 to the Present
- HIST 547 The Intellectual History of Europe in the Twentieth Century
- HIST 548 British History, 1832 to the Present
- HIST 557 Nationalism and Communism in East Central Europe from 1772 to the Present
- HIST 567 Oil, The Great Powers, and the Persian Gulf, 1900 to the Present
- HIST 568 Russia in the 20th Century
- HIST 569 The Middle East in the 19th and 20th Centuries
- HIST 570 The Middle East Since World War II
- HIST 586 Ancient and Medieval Japan
- HIST 587 Early Modern Japan
- HIST 589 Japan Since 1945
- HIST 593 Modern Korea
- HIST 595 Business and Industry in Japan
- HIST 599 The Rise and Fall of Apartheid
- JOUR 502 International Journalism
- JOUR 538 International Marketing Communications
- LAA 602 Topics in Latin American Studies:______
- PHIL 506 Chinese Thought
- PHIL 580 Marxism
- PHIL 686 Main Currents of Russian Thought II
- POLS 636 Comparative Administration
- POLS 632 Politics in Western Europe
- POLS 654 Politics and Government of Russia and the Central Eurasian States
- POLS 655 Politics of East-Central Europe
- POLS 656 Governments and Politics of East Asia
- POLS 657 Government and Politics of Southeast Asia
- POLS 658 Theories of Politics in Latin America
- POLS 659 Political Dynamics of Latin America
- POLS 660 The Politics and Problems of Developing Countries
- POLS 661 Politics of the Middle East
- POLS 663 Protestant and Revolution
- POLS 665 Politics in Africa
- POLS 667 Islam and Politics
- POLS 668 Reform in Contemporary China
- POLS 669 Topics in Comparative Politics:______
- POLS 670 United States Foreign Policy
- POLS 671 International Cooperation
- POLS 672 International Political Economy
- POLS 673 International Organization
- POLS 675 Russian Foreign Policy
- POLS 676 International Relations of Asia
- POLS 678 Chinese Foreign Policy
- POLS 679 International Conflict
- POLS 680 International Relations in Political Philosophy
- POLS 681 Comparative Foreign Policy
- POLS 682 U.S. Foreign Policy Toward the Third World
- POLS 689 Topics in International Relations:
- POLS 726 Public Policy in Comparative Perspective
- POLS 754 Politics and Government of Russia and the Central Eurasian States
- POLS 755 Politics of East-Central Europe
- POLS 758 Revolutionary Politics of Latin America
- POLS 760 The Politics and Problems of Developing Countries
- POLS 774 International Law
- POLS 775 Russian Foreign Policy
- POLS 776 International Relations of Asia
- POLS 777 International Relations of Latin America
- POLS 778 Topics in International Relations:______
- POLS 954 Politics in Post-Soviet States
- POLS 955 Politics of Advanced Industrial Societies
- POLS 956 The Governments and Politics of Asia
- POLS 959 Topics in Comparative Politics:______
- POLS 960 Politics of Developing Countries
- POLS 961 The Politics of Culturally Plural Societies
- POLS 962 The Breakdown, Restoration, and Consolidation of Democracies
- POLS 965 Soviet and East European Policies and Problems
- POLS 970 Foreign Policy Analysis
- POLS 972 Theories of International Conflict
- POLS 973 International Political Economy
- POLS 974 International Mediation and Conflict Resolution
- POLS 975 Foreign Policies of Post-Soviet States
- POLS 976 International Relations of Asia
- POLS 978 Advanced Topics in International Relations Theory
- POLS 979 Topics in International Relations:______
- PSYC 572 Psychology and International Conflict
- REL 506 Religion in China
- REL 509 Religion in Japan
- REL 522 Studies in Islam
- REL 535 The History of Islam in Africa
- REL 669 Human Conflict and Peace
- REL 733 Seminar in Eastern Religious Texts:____
- REL 762 Seminar in Eastern Religious Thought:____
- REL 776 Seminar in Religion and Society in Asia:____
- SOC 531 Global Social Change
- SOC 535 Industrialization in Developing Nations
- SOC 630 Latin American Society
- SOC 633 Traditional Rural China and the Communist Revolution
- SOC 672 Sociology of War and Peace
- SOC 850 Latin American Society
- SOC 873 International Political Economy
- SOC 875 The Political Economy of Globalization
- SOC 930 Seminar on Special Topics in Comparative Studies:______
- THAF 527 Asian Theatre and Film
- THAF 710 Styles of Acting: Classical Japanese
- THAF 810 Advanced Studies in Japanese Acting
- THAF 827 Japanese Theatre and Film
- WS 560 Race, Gender, and Post-Colonial Discourses

Italian

See French and Italian.
Japanese
See East Asian Languages and Cultures.

Korean
See East Asian Languages and Cultures.

Kress Foundation Department of Art History
See History of Art.

Latin
See Classics.

Latin American Area Studies
Chair: Elizabeth A. Kuznesof, latamst@ku.edu
Associate Director and Graduate Adviser: Brent Metz
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574, www.ku.edu/~latamst
(785) 864-4213, fax: (785) 864-3800


Professors Emeriti: Adams, Brushwood, Casad, Drayton, Garland, Griffith, Lande, Lichtwardt, Smith, Souza, Weiss, Wells

Associate Professors: Ajayi-Soyinka, Birch, Clark, Cohan, Corteguera, Davis, Gerner, Gibson, Harkess, Herlihy, Hoopes, Iwata, Kleinberg, Laird, Lewin, Luckey, Mayhew, Mennerick, Najafizadeh, Peterson, Preston, Prum, Pye, Reich, Rivera, Rodriguez, Rosenthal, Simões, Skinner, Swann, Terwilliger, Velasco, Villeneuve

Assistant Professors: C. Anderson, Barrière, Bayard de Volo, Brown, Caminero-Santangelo, Cárdenas, Earnhart, Frank, Gonzalez-Bueno, Henry, Jenkins, Longoria, Macgonagle, Mendoza, Postma-Carttar, Rego, Williams, Ybarra

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.

Admission
Admission requires a B.A., preferably in one of the social sciences or humanities, language proficiency in either Spanish or Portuguese as demonstrated by completion of a fourth-semester course or the equivalent, and acceptance by the Graduate School. The Graduate Record Examination is required for U.S. citizens.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 either Spanish or Portuguese. Comprehensive proficiency includes oral, 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, Kaaqchikel 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. is a terminal degree 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 Vitoria, Brazil; and Guadalajara, Mexico; respectively. The center has helped develop exchange relationships with universities in Costa Rica, Paraguay,
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 952</td>
<td>Seminar in Ideology, Violence, and Social Change in Latin America</td>
</tr>
<tr>
<td>HIST 980</td>
<td>Seminar in Latin American History</td>
</tr>
<tr>
<td>HIST 981</td>
<td>Seminar in Latin American Revolution</td>
</tr>
<tr>
<td>HIST 982</td>
<td>Seminar in Ideology, Violence, and Social Change in Latin America</td>
</tr>
<tr>
<td>LING 570</td>
<td>Topics in American Literature</td>
</tr>
<tr>
<td>SPAN 717</td>
<td>History of the Spanish Language</td>
</tr>
<tr>
<td>SPAN 720</td>
<td>Syntax and Composition</td>
</tr>
<tr>
<td>SPAN 770</td>
<td>Spanish-American Drama</td>
</tr>
<tr>
<td>SPAN 771</td>
<td>Spanish-American Literature</td>
</tr>
<tr>
<td>SPAN 772</td>
<td>The Modern Spanish-American Novel, 1900-1950</td>
</tr>
<tr>
<td>SPAN 773</td>
<td>The Modern Spanish-American Novel Since 1950</td>
</tr>
<tr>
<td>SPAN 774</td>
<td>Spanish-American Poetry</td>
</tr>
<tr>
<td>SPAN 776</td>
<td>Spanish-American Short Story</td>
</tr>
<tr>
<td>SPAN 781</td>
<td>Spanish-American Colonial Studies</td>
</tr>
<tr>
<td>SPAN 784</td>
<td>Spanish-American Modernism</td>
</tr>
<tr>
<td>SPAN 785</td>
<td>Special Topics in Spanish-American Literature</td>
</tr>
<tr>
<td>SPAN 790</td>
<td>Spanish Linguistics: Theory and Application to Teaching</td>
</tr>
<tr>
<td>SPAN 795</td>
<td>Literary Theory and Criticism</td>
</tr>
<tr>
<td>SPAN 817</td>
<td>Spanish Historical Grammar</td>
</tr>
<tr>
<td>SPAN 970</td>
<td>Seminar in Spanish American Drama</td>
</tr>
<tr>
<td>SPAN 972</td>
<td>Seminar in Spanish American Novel</td>
</tr>
<tr>
<td>SPAN 974</td>
<td>Seminar in Spanish American Poetry</td>
</tr>
<tr>
<td>SPAN 976</td>
<td>Seminar in Spanish American Short Story</td>
</tr>
<tr>
<td>SPAN 978</td>
<td>Seminar in Spanish American Essay</td>
</tr>
<tr>
<td>TH&amp;F 702</td>
<td>Graduate Seminar in Latin American Film</td>
</tr>
<tr>
<td>WS 651</td>
<td>Women and Politics in Latin America</td>
</tr>
</tbody>
</table>

**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 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 or Gibson)
- ARCH 647 Pre-Columbian and Colonial Architecture of Mexico and South America
- ECON 554 Economic History of the Caribbean Region
- ECON 584 Economic Development of Latin America
- GEOG 571 Topics in Cultural Geography: _____ (taught by Herlihy or Brown)
- GEOG 575 Geography of Population
- GEOG 591 Geography of Latin America
- GEOG 791 Latin American Regions
- GEOG 800 Seminar in Geography: Cultural Ecology (taught by Herlihy)
- GEOG 990 Seminar in Regional Geography: Central American Indigenous Peoples (taught by Herlihy)
- HA 505 Special Study: Latin America
- HAIT 501 Directed Studies in Haitian Culture
- HAIT 700 Investigation and Conference
- HIST 510 Topics in: Latin America (taught by Stansifer, Rosenthal, Kuznesof)
- HIST 571 The Spanish Borderlands in North America
- HIST 573 Latin America in the 19th Century
- HIST 574 Slavery in the New World (same as AAAS 574)
- HIST 575 History of Mexico
- HIST 576 History of Central America
- HIST 577 History of the Caribbean
- 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 Stansifer, Rosenthal, Kuznesof)
- HIST 607 The Family in History: Comparative Perspectives (taught by Kuznesof)
- HIST 696 Seminar in: Latin America (taught by Stansifer, Rosenthal, Kuznesof)
- HIST 801 Colloquium in: _____ (taught by Stansifer, Rosenthal, Kuznesof)
- HIST 802 Colloquium in Comparative History: _____ (taught by Stansifer, 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
- 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 850 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 Mesoamerican Writing
- POLS 651 Women and Politics in Latin America
- POLS 658 Theories of Politics in Latin America
- POLS 785 Political Dynamics of Latin America
- POLS 821 Theories of Politics in Latin America
- POLS 822 Women and Politics
- POLS 823 Comparative and Cross Cultural Management (taught by Kleinberg)
- POLS 824 International Business (taught by Kleiner)
- POLS 825 Graduate Seminar in Business: Global Business Environment (taught by Birch)
- ECON 582 Economic Growth and Development
- ECON 604 International Trade
- ECON 605 International Finance
- ECON 606 Economic Theory
- ECON 740 Theory of Economic Growth and Development
- ECON 745 The Theory of International Finance
- ECON 805 The Advanced Theory of International Finance
- ENGL 570 Topics in American Literature: _____
- GEOG 570 Cultural Ecology GEOG 571 Topics in American History (taught by Herlihy)
- GEOG 770 Proseminar in Population Geography
- GEOG 975 Seminar in Population Geography (taught by Nunley)
- HIS 515 Latin American Art 1492-1992
- HIS 706 Seminar on Special Problems in Art History: North America (taught by Eldredge)
- HAIT 500 Directed Studies in Haitian Language and Literature
- HIST 551 Spain and its Empire, 1450-1700
- HIST 572 The United States Borderlands: People, Place, Past HIST 589 Material Culture
- HIST 609 Historical Geography
- HIST 610 Multinational Corporations: The Role of Money and Power
- HIST 629 United States Diplomatic History II
- HIST 636 Agriculture in World History (taught by Worster)
- HIST 637 Seminar: The Atlantic World in the Early Modern Period
- HWC 620 Study of a Culture: _____
- LAW 930 International Law Seminar (taught by Head)
- LING 975 The Structure of: _____
- LING 976 Introduction to Linguistic Science
- LING 977 Topics in Linguistics: _____
- MUSC 754 Music of the Baroque Era
- MUSC 940 Graduate Seminar in Selected Topics in Musicology: 20th-century Hispanic Masters (taught by Clark)
- POLS 562 Women and Politics
- POPS 600 Contemporary Feminist Political Theory JOUR 502 International Journalism
- POLS 669 The Politics and Problems of Developing Countries
- POLS 663 Protest and Revolution
Linguistics

Chair: Sara Thomas Rosen
Blake Hall, 1541 Lilac Lane, Room 427
Lawrence, KS 66044-3177, (785) 864-3450
www.linguistics.ku.edu

Professors: Rankin, Yamamoto
Professors Emeriti: Ingemann, Miner, Percival
Associate Professors: Henderson, Jongman, Pye, Rosen, Serena, Watkins
Associate Professor Emeritus: Erazmus

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 (not required of foreign students). Applicants who are not native speakers of English must demonstrate English proficiency with a Test of English as a Foreign Language scores of at least 58 (paper) or 23 (computer) in each of Sections 1, 2, and 3 or scores on the Applied English Center’s proficiency test of no less than 80 percent in each part. Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 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: Thirty credit hours of graduate work including

1. One course in each of the following areas:
   • LING 794 Proseminar
   • LING 705 Phonetics I
   • LING 712 Phonology I
   • LING 725 Syntax I
   • A course in first language acquisition or second language acquisi-
2. Fifteen credit hours of electives to be determined by the student and the adviser.

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 30 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 30 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 780); or
- A detailed research or grant proposal.

**Ph.D. Degree Requirements**

Prerequisites. Courses equivalent to those required for the M.A. (30 hours consisting of LING 794, LING 705, LING 712, LING 725, a course in first- or second-language acquisition, four electives, LING 899, and thesis and thesis defense or examination option).

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 9 credit hours is considered full-time during the academic semester. See General Regulations in the General Information chapter of this catalog.

Research Skills. The student must demonstrate a reading or research ability in a second language (not English or the language chosen to fulfill the M.A. language requirement). The research skills requirement also can be met by a course in computer programming language, LING 783 Computational Linguistics, or a course in statistics. The student also must demonstrate a linguistic knowledge of the structure of a non-Indo-European language. The student also is expected to know such additional languages as may be necessary for research.

Minimum Course Requirements. A total of 18 hours is required, consisting of

LING 750 Comparative and Historical Linguistics ........................................ 3
Two of the following: ................................................................. 6
LING 714 Phonology II (3)
LING 726 Syntax II (3)
LING 850 Advanced Comparative and Historical Linguistics (3)
Three electives ................................................................. 9

The total number of post-M.A. credit hours required is 18. Courses that satisfy the prerequisites above cannot be used to fulfill this requirement, but other M.A.-level courses and the three courses listed in this section can count toward the 18 post-M.A. hours.

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.

**Dissertation**

**Final Oral Examination**

**Facilities**

The Department of Linguistics, with the Department of Speech-Language-Hearing: Sciences and Disorders, operates the Undergraduate Instructional Laboratory in Phonetics and Speech Science. The department has a fully equipped phonetics laboratory (KUPPL), a small departmental library, a student computer laboratory, and tape recorders for field work.

**Linguistics Courses**

LING 525 Introduction to Syntax (3).
LING 560 Languages of the World (3).
LING 565 Native Mesoamerican Writing (3).
LING 570 The Structure of Japanese (3).
LING 572 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 science for majors and others intending to do advanced work in linguistics. Emphasis on synchronic description of languages. Lectures and laboratory sessions. Will not count toward any graduate degree in linguistics. Not open to students who have taken LING 186 or LING 197.
LING 705 Phonetics I (3). Introduction to the speech sounds used in languages of the world, the mechanisms used in their production, and their acoustic properties. The course includes practice in discrimination and transcription. Prerequisite: An introductory linguistics course. LEC
LING 707 Phonetics II (3). A study of speech sounds in languages of the world with special emphasis on experimental evidence related to their production and acoustic properties. Prerequisite: LING 705.
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. Not open to students who have taken LING 308.
LING 709 Introduction to 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). A study of sound structure and function within languages; principles and techniques of phonological analysis. Introduction to morphophonemics, distinctive feature and rule notation. Prerequisite: A course in phonetics. LEC
LING 714 Phonology II (3). Distinctive feature systems; interpretive input-output systems, markedness; phonological universals; the role of naturalness, generality, and economy in evaluation procedures. Prerequisite: LING 712.
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 722 Grammar: A Functional and Typological Approach (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 absolutive. Basic word order typology and discourse functions such as topic, focus, and cohesion are introduced. \( \text{LEC} \)
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 projections of argument structure, binding, control, locality condition, constraints on representation, and the relation between syntax and the semantic module. Prerequisite: LING 725.
LING 730 Linguistics in Anthropology (3). The study of language as it concerns anthropology. Language systems in relation to culture, language taxonomy, semantics, linguistic analysis as an ethnographic tool. (Same as ANTH 730.) LEC
Thirty-three KU students have won Goldwater scholarships for excellence in science and mathematics since the award was established in 1989.

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.

LING 731 Semantics I (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 discourse. 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 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 735.) 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. May be repeated for different topics. (Same as PSYC 737.) Prerequisite: PSYC 735/LING 735 or consent of instructor. LEC.

LING 740 Linguistic Data Processing (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 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 phonetic 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 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 phonology. 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 780 Field Methods in Linguistics (1-3). An introduction to methods of eliciting linguistic materials from an informant; practice in phonetic transcription; techniques of handling and analyzing materials collected. Methods will be illustrated through a detailed study of at least one language, usually one not previously known to the students. May be repeated with consent of the departmental adviser. Prerequisite: LING 705 or other evidence of the ability to transcribe phonetically. FLD.

LING 783 Computational Linguistics (3). A survey of computer-based approaches to the study of morphology, syntax, 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 linguistic 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 linguistics 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 children’s language acquisition. A letter of credit. Students will be graded S/F. (Same as IDFL 797, PSYC 799, and SPLH 799.) 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 740 or LING 735. LEC.

LING 860 Seminar in Second Language Acquisition (3). Analysis of recent theoretical issues and introduction to the methodology of research in the study of second language acquisition. Prerequisite: LING 715. LEC.

LING 887 Preparation for the M. A. Comprehensive Examination (1-9). An independent reading course for students preparing to take the M.A. Comprehensive Examination. Normally to be taken during the semester or the summer session immediately preceding the semester in which the comprehensive examination is taken. May be taken for a maximum of two semesters or nine credits, whichever comes first. Does not count toward the minimum number of credits required for a graduate degree in linguistics. Graded satisfactory/unsatisfactory depending on the results of the comprehensive examination. RSH.

LING 898 Investigation and Conference (1-12). Prerequisite: Written consent of instructor. RSH.

LING 899 Master’s Thesis (1-12). RSH.

LING 910 Linguistic Seminars: _____ (1-3). The content and prerequisites of this course will vary. May be repeated. LEC.

LING 925 Seminar in Generative Grammar (3). Topics in generative phonology, syntax, or semantics. Prerequisite: LING 714 and LING 726. LEC.

LING 947 Seminar in American 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 reporting 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 dialect of one of the more accessible languages. Student must show evidence (file slips for grammatical and phonological analysis, dictionary slips, etc.) of having done the required amount of work without necessarily being able to turn in a completed analysis. Normally for three credits; six credits would be available under certain circumstances such as intensive summer work on location away from the university. Graded on satisfactory/unsatisfactory basis. Prerequisite: LING 712, LING 725, and LING 786. FLD.

LING 992 Readings in Linguistics (1-6). Individual reading of linguistic materials. May be repeated. LEC.

LING 997 Ph.D. Examination (1-12). A course for students writing answers to the preliminary Ph.D. examination and/or preparing to take the Oral Comprehensive Examination. Normally to be taken during the semester in which the student is submitting answers to the written preliminary examination. May be taken for a maximum of two semesters or twelve credits, whichever comes first. Does not count toward the minimum number of credits required for a graduate degree in linguistics. Graded satisfactory/unsatisfactory on the results of the examination. RSH.

LING 998 Investigation and Conference (1-12). Prerequisite: Written consent of instructor. RSH.

LING 999 Doctoral Dissertation (1-12). RSH.

Mathematics

Chair: Jack Porter

Snow Hall, 1460 Jayhawk Blvd., Room 405
Lawrence, KS 66045-7523, (785) 864-3651

www.math.ku.edu

Graduate Director: Judith Roitman,
525 Snow Hall, (785) 864-3651

Professors: Bayer, Brown, Byers, Duncan, Fleissner, Galvin, Himmelberg, Huneke, Katz, Lang, Lerner, Mandal, Paschke, Pasik-Duncan, Porter, Roitman, Sheu, Stahl, Torres, F. Van Vleck
Associate Professors: Church, Cobb, Gavosto, Gay, Hu, Huang, E. Van Vleck, Veretennikov, Xu
Assistant Professors: Liu, Purnaprajna, Stanislavova, Stevanov

The department offers a full graduate program, leading to both the M.A. and Ph.D. degrees. Programs can emphasize either pure mathematics or applied mathematics and statistics. A broad range of programs is possible in both pure and applied mathematics in the areas of algebra, analysis, combinatorics, control theory, dynamical systems, geometry, numerical analysis, probability, statistics, partial differential equations, set theory, and topology. Thus, a student can design a program with emphasis ranging from one of the traditional fields of pure mathematics to one of the fields of applied mathematics and statistics.

Admission
Regular admission ordinarily is granted to applicants who hold bachelor’s degrees, whose undergraduate grade-point averages are B or above (3.0 on a 4.0 scale), and whose undergraduate programs include mathematics comparable to that required for undergraduate majors in mathematics at KU (at least a B average in at least four upper-division courses). Applicants who do not meet these criteria but whose records and recommendations suggest likely success in the proposed programs may be admitted, possibly on probationary status.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements
A candidate must fulfill the general requirements of the Graduate School. In particular, this means that normally at least 30 hours of appropriate graduate credit must be earned (with at least a B average) and that a research component must be included in the candidate’s program. Usually this 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 the following options:

Option A. A satisfactory performance on the departmental written qualifying examination.

Option B. 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. These additional 9 hours may include the enrollment 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. A candidate must give a short (30 to 60 minutes) presentation of her or his research component in the first part of the oral examination.

Option C. Complete 36 credit hours of courses numbered 600 or above. Complete MATH 727, MATH 765, MATH 781, MATH 791, and either MATH 790 or MATH 792. 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, MATH 791, or MATH 792 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 enrollment credit (a minimum of 2 hours and a maximum of 6 hours) used to fulfill a research component (e.g., enrollment in MATH 799, 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 component 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.

Option C meets the needs of students who intend to work in government or industry, teach in small colleges, or pursue further graduate study in the mathematical, natural, or social sciences. Students electing this option are encouraged to take courses offered by other departments in applied mathematics.

A variety of course programs is possible under Option C, and the program selected by a particular student depends both on the student’s educational purposes and on the current availability of courses. In general, the student’s program must have a coherent theme and must be appropriate as a master’s level program in its particular area of mathematics.

Ph.D. Degree Requirements
In addition to the general requirements of the Graduate School, the department requires the student to have met the following requirements before being admitted to the comprehensive examination.

1. Satisfied 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.

2. Passed written qualifying examinations, one in algebra, one in analysis, and one in either numerical analysis or probability and statistics.

3. Passed one preliminary examination in an area close to the focus of the eventual doctoral thesis.

4. Passed 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).
Mathematics

Mathematics Courses

MATH 500 Intermediate Analysis (3).
MATH 510 Introduction to the Theory of Computing II (3).
MATH 520 Intermediate Logic (3).
MATH 526 Applied Mathematical Statistics I (3).
MATH 527 Applied Mathematical Statistics II (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 (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 Fourier Analysis of Time Series (3).
MATH 624 Discrete Probability (3).
MATH 627 Probability (3).
MATH 628 Mathematical Theory of Statistics (3).
MATH 631 Operations Research (3).
MATH 645 Complex Variable 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 686 Computer Algebra I (3).
MATH 687 Computer Algebra II (3).
MATH 696 Special Topics: _____ (1-3).
MATH 699 Directed Reading (1-3).
MATH 701 Topics in Mathematics for Teachers: _____ (1-4). 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. LEC
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/or post-stratified samples, and multistage sampling. Estimation 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 about the populations sampled. Topics include quantile tests, tolerance limits, the sign test, contingency tables, rank-sum tests, and rank correlation. Prerequisite: MATH 628 or permission of instructor. 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; Mobius 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 pre-measure-theoretic probability. Topics include probability spaces, conditional probabilities 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, laws of large numbers, and the central limit theorem. Prerequisite: MATH 125 or equivalent. LEC
MATH 728 Statistical Theory (3). Theory of point estimation and hypothesis testing with applications. Confidence region methodologies and relations to estimation 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, and 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, arithmetical functions and miscellaneous additional topics. Prerequisite: MATH 125 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). MATH 765 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 125 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 320 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 hyperbolic and parabolic) 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, with a discussion of convergence 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 of linear algebra. Topics covered are 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, spectral radius, dual space, quotient space. Prerequisite: MATH 590. 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 with the advice of an 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 contour integration; the argument principle; maximum modulus principle; Schwarz symmetrization 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. 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; connected sets; continuous functions; generalized convergence; 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 and covering spaces (including classification); compact surfaces; homology theory; computations (including homotopy invariance) and applications (including Brouwer fixed point theorem); introduction to cohomology theory. Prerequisite: MATH 792 and MATH 820, or permission of instructor. LEC

MATH 822 Algebraic Topology (3). Review of simplicial homology; Lebesgue 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 Abstract Algebra (3). A study of some structures, theorems, and techniques in algebra whose use has become common in many branches of mathematics. Prerequisites: MATH 765 and MATH 792. RSH

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 manifolds. Prerequisite: MATH 765 and MATH 792. LEC

MATH 850 Ordinary Differential Equations (3). Existence and uniqueness theorems. Linear systems; stability theory; perturbation theory. Poincare-Bendixon theory; boundary value problems. Prerequisite: MATH 766. 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 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 on 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 896 Master's Research Component (1-6). RSH

MATH 899 Master's Thesis (1-10). RSH

MATH 905 Several Complex Variables (3). Holomorphic functions in several complex variables, Cauchy's integral for polydiscs, 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 792 and MATH 792. LEC

MATH 915 Introduction to Homological Algebra (3). Injective and projective resolutions, homological dimension, chain complexes and derived functors (including Tor and Ext). Prerequisite: MATH 830 and MATH 851, 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, Maurey-Carleman 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, characteristic 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 exact sequence. Prerequisite: MATH 792 and MATH 960. LEC

MATH 990 Seminar: (1-10). LEC

MATH 993 Readings in Mathematics: (1-10). RSH

MATH 996 Special Topics: (3). Advanced courses on special topics; given as need arises. Prerequisite: Variable. LEC

MATH 998 Doctoral Dissertation (1-10). RSH

Meteorology
See Physics and Astronomy.

Microbiology
See Biological Sciences: Molecular Biosciences.
Museum Studies

Molecular Biosciences
See Biological Sciences: Molecular Biosciences.

Museum Studies
Interim Coordinator: John E. Simmons
Bailey Hall, 1440 Jayhawk Blvd., Room 207
Lawrence, KS 66045-7574, (785) 864-4543
www.ku.edu/~museumst

Museum Studies Administrative Council: Kaesler (Geology), Krishitalka (Ecology and Evolutionary Biology), Lewin (History), Norris (History of Art), Yetman (American Studies)

The graduate program in museum studies offers training for professional careers in museums, historical agencies, or related institutions. Its curriculum provides a basic understanding of the nature of museums and historical agencies as well as specialized training administered by the Departments of American Studies, Anthropology, Ecology and Evolutionary Biology, Geology, and History.

Opportunities for study at KU cover a broad range, including anthropological museums, archival and manuscript repositories, art museums, historical museums and societies, natural history museums, and related administrative and research activities. Although diversity is a hallmark of the various types of museums and historical agencies, they share many challenges, philosophies, and practices.

The program offers a core of courses on the theories, history, techniques, and problems common to museums and historical agencies as well as the specialized operations of such institutions. Students receive classroom and field training in methods and subject matter in a designated concentration. Graduates undertake professional responsibilities in the world of museums, historical agencies, and related institutions.

An administrative council in the College of Liberal Arts and Sciences administers the program in conjunction with participating departments. The faculties of those departments constitute the program’s faculty.

For additional instructional, research, and field services, the program draws on the outstanding facilities, holdings, and staff of KU’s Museum of Anthropology, Natural History Museum and Biodiversity Research Center, Spencer Museum of Art, Spencer Research Library, and Stannard Conservation Laboratory. There are also nearby state universities, historical agencies, specialized libraries, and museums with which cooperative arrangements can be made.

Admission
The student must hold a baccalaureate degree and have accumulated 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. Admission is based on the applicant’s undergraduate record, letters of reference, statement of academic objectives, and Graduate Record Examination scores. Acceptance is decided by the administrative council in consultation with the department responsible for the academic track most pertinent to the applicant’s career interests.

For information on the interdisciplinary doctoral degree in neurosciences, contact Elias Michaelis, Malott Hall, 1251 Wescoe Hall Dr., Room 5064, Lawrence, KS 66045-7582, (785) 864-4001.

M.A. Degree Requirements
The course of study leading to the Master of Arts comprises a minimum of 42 semester credit hours at the graduate level. Required work falls into three categories: 18 credit hours of core courses such as The Nature of Museums; 18 hours of professional and subject-matter courses in the student’s designated disciplinary track (American studies, anthropology, geology, history, or natural history); 6 hours of a supervised apprenticeship in an approved museum or historical agency, part-time for two semesters, or the equivalent. Upon satisfactory completion of the required credit hours, a student must pass a formal examination or evaluation of competence in museum studies to be nominated for the degree.

Graduate Certificate Program in Collections Conservation
The one-year graduate certificate program offers selected graduates of the museum studies program the opportunity to take advanced conservation course work under the direction of professional conservators in the KU Libraries’ Stannard Conservation Laboratory. Participants gain a solid background in preservation and conservation theory, principles, and philosophical issues. They apply this knowledge while working daily in a conservation facility, enabling them to cope effectively with many of the collections conservation issues that they will face in a museum archive, or library environment. The program also gives them basic conservation skills that enable them to function as trained conservation technicians.

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 using, as appropriate, case studies and a simulated museum organization model. (Same as AMS 731, ANTH 796, BIOL 785, GEOLO 783, HIST 728.) Prerequisites: 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, ANTH 796, BIOL 782, and HIST 720.) Prerequisites: 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, ANTH 793, BIOL 787, GEOLO 781, and HIST 723.) Prerequisites: 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, conservation, automated information management, and related topics will be presented for museums of art, history,
Neurosciences

See the School of Pharmacy chapter of this catalog.

Philosophy

Chair: A.C. Genova, aeg@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3052
Lawrence, KS 66045-7590, (785) 864-2329
www.ku.edu/~philos

Graduate Adviser: Thomas Tuozzo, ttuozzo@ku.edu, 3067 Wescoe Hall, (785) 864-2330

Professors: Bricke, Cudd, DeGeorge, Genova, Marquis, Martin, Woelfel
Professors Emeriti: Cole, Osborne, Verdu

Associate Professors: Skidmore, Tuozzo
Assistant Professors: Eggleston, Robertson, Sawyer

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

Students seeking either the master’s or the doctoral degree must have taken the following or their equivalent: a course in symbolic logic; a course in ethics, a course in the history of ancient philosophy, a course in the history of modern philosophy, a course in 19th- or 20th-century nonanalytic philosophy; a course in 20th-century analytic philosophy, and a course in either metaphysics, theory of knowledge, philosophy of mind, or philosophy of language. An applicant may be admitted lacking one or more of these courses but must make up the deficiencies as soon as possible. The department also requires Graduate Record Examination scores (verbal, quantitative, analytical).

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements

A student becomes eligible for the M.A. by completing 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, including 6 hours of thesis. The student must submit an acceptable thesis and pass a two-part oral or written examination including one part covering the general material of the M.A. program and a second part devoted to a defense of the thesis. Students must complete two courses at the 500 level or above (or the equivalent) in each of the following areas: (1) metaphysics, theory of knowledge, philosophy of logic, (2) ethics and theory of value, and (3) history of philosophy. 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 second semester.

The department also offers a nonthesis M.A. option. Students may, if they choose, substitute 6 hours of acceptable (with a course grade of B or higher) graduate
work in philosophy in courses numbered 800 or above (not including PHIL 899) for the thesis requirement. The program must include an appropriate research component. Students who select this option must pass an oral comprehensive examination over their M.A. course work, conducted by an examination committee of three faculty members. The nonthesis option for the M.A. degree also can be satisfied by Ph.D. students who successfully complete PHIL 901 Ph.D. Tutorial. These students must be admitted to the Ph.D. program, satisfy M.A. distribution requirements, and be eligible to take PHIL 901.

Joint J.D./M.A. Degree Program

The joint degree program leading to the J.D. degree and the M.A. degree 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 in the program 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 joint program is open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records indicate that the applicants have the capacity to complete the law and philosophy program. Applicants must meet the admission requirements of the School of Law, the Department of Philosophy, and the Graduate School. Applicants must apply and be admitted to each school separately before entering the first year of the program. The Law School Admission Test is the only required entrance examination for School of Law applicants. All admission requirements (including 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 curriculum 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 credit hours in the Department of Philosophy.

Typical Enrollment Pattern for J.D./M.A. Program

<table>
<thead>
<tr>
<th>First Year (32 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Law courses ......................</td>
<td>32</td>
</tr>
<tr>
<td>Philosophy courses ................</td>
<td>0</td>
</tr>
<tr>
<td>Second Year (28 credit hours)</td>
<td></td>
</tr>
<tr>
<td>Law courses ......................</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses ................</td>
<td>6</td>
</tr>
<tr>
<td>Third Year (31 credit hours)</td>
<td></td>
</tr>
<tr>
<td>Law courses ......................</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses ................</td>
<td>9</td>
</tr>
<tr>
<td>Summer Session (11 credit hours)</td>
<td></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 ..................................... 30
- Additional philosophy courses ........................... 12
- Total minimum credit hours required .................. 104

It is essential for the student to consult with the director of graduate studies in philosophy and with 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 West 15th St., Lawrence, KS 66045-7577; or the University of Kansas, Director of Graduate Programs, Department of Philosophy, Wescoe Hall, 1445 Jayhawk Blvd., Room 3052, Lawrence, KS 66045-7390. 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 the general requirements of the Graduate School, 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 Graduate School and department rules.

2. Complete PHIL 800 Tutorial with a grade of B or higher, typically in the second semester of enrollment.

3. Complete PHIL 610 Symbolic Logic or the equivalent with a grade of B or higher by the time the distribution requirement is completed (see below).

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 626 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 696 The Philosophy of History
  - PHIL 860 Topics in Philosophy of Science: ______ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650)
  - PHIL 862 Topics in Logic: ______ (Prerequisite: PHIL 610 or PHIL 626 or PHIL 630)
  - PHIL 868 Topics in Philosophy of Language: ______ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650)
  - PHIL 870 Topics in Metaphysics: ______ (Prerequisite: PHIL 620 or PHIL 630 or PHIL 648 or PHIL 650 or PHIL 654)
  - PHIL 872 Topics in Theory of Knowledge: ______ (Prerequisite: PHIL 620 or PHIL 648 or PHIL 650 or PHIL 654)
  - PHIL 877 Topics in Philosophy of Mind: ______ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or PHIL 654)
  - PHIL 888 Topics in the Philosophy of the Social Sciences: ______ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650 or PHIL 654)
- Value Theory (two courses)
  - PHIL 504 Philosophy of Sex and Love
  - PHIL 555 Justice and Economic Systems
  - PHIL 595 Philosophy and Race
  - PHIL 662 Aesthetics
  - PHIL 666 Rational Choice Theory
  - PHIL 668 Political Philosophy
  - PHIL 670 Contemporary Ethical Theory
  - PHIL 671 Feminist Theories in Ethics
  - PHIL 762 History of Ethics
Graduate Work in Applied Ethics

Several faculty members have an interest in topics in applied ethics, in particular in business and medical ethics. Students who plan to emphasize applied ethics may do so under the supervision of this faculty group.

Prospectus for Thesis or Dissertation

Any candidate who enrolls in either PHIL 899 Master's Thesis or PHIL 999 Dissertation should have selected a member of the department as thesis or dissertation adviser and should submit a prospectus to the department, showing what problems the student 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 General Regulations 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. No course counted on this basis toward the M.A. degree can be counted toward the Ph.D. degree unless it has been specifically petitioned for and approved by the graduate faculty.

The department's requirement of 48 credit hours of acceptable graduate work for the Ph.D. degree can be reduced by petition depending on the amount and quality of equivalent graduate course 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 592 Contemporary Continental Philosophy (3).
PHIL 600 Readings in Philosophy: ______ (3-6).
PHIL 605 The Philosophy of Plato (3).
PHIL 607 The Philosophy of Aristotle (3).
PHIL 611 Topics in Symbolic Logic: ______ (1-3).
PHIL 612 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 800 Graduate Tutorial: All students must satisfy this requirement. Students may not enroll in PHIL 901 before the third semester and normally should enroll in PHIL 901 no later than the sixth semester. (Students who successfully petition to reduce the overall 48-hour requirement by as many as 18 hours should enroll in PHIL 901 no later than the fourth semester.)

6. Satisfy the department requirement in foreign language or other research skills by completion of PHIL 800 Graduate Tutorial and demonstration of a reading knowledge of one of the following languages: French, German, Greek, Latin, or a language approved by the department in response to the student’s petition. Any student planning to write a dissertation dealing with primary texts written in languages other than English must, before submitting a prospectus, satisfy the dissertation committee that he or she has an adequate reading knowledge of the language or languages, if the committee deems that necessary.

7. Pass the comprehensive oral examination for Ph.D. candidacy. This examination cannot be taken until all of the above requirements have been completed, or until the semester in which the requirements will be completed.

After the oral comprehensive examination has been passed, the student must write a dissertation of substantial merit showing the planning, conduct, and result of original research and must pass a final oral examination and defense of the dissertation.
Physics research facilities include a high Tc film and device fabrication lab, a clean room for electronics testing and development, and a lab for developing semiconductor lasers.

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.

PHIL 670 Contemporary Ethical Theory (3).
PHIL 671 Feminist Theories in Ethics (3).
PHIL 672 History of Ethics (3).
PHIL 674 Philosophy of Law (3).
PHIL 676 Death and Dying in Modern Medicine (3).
PHIL 677 Medical Ethics (3).
PHIL 685 Main Currents of Russian Thought I (3).
PHIL 686 Main Currents of Russian Thought II (3).
PHIL 696 The Philosophy of History (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. FLORES requirements.

PHIL 801 Advanced Studies in Plato (3). Prerequisite: PHIL 508 or PHIL 608 or PHIL 612 or PHIL 648 or PHIL 650. LEC
PHIL 802 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 prerequisite to be announced in the timetable. Prerequisite: Variable. Minimum of one junior-senior course in philosophy. LEC
PHIL 820 Topics in Science: (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 the timetable. Prerequisite: 500-600 level course specified as appropriate. LEC

PHIL 824 Kant (3). Prerequisite: PHIL 640 or PHIL 648 or PHIL 650 or PHIL 654. LEC
PHIL 828 Kant (3). Prerequisite: PHIL 640 or PHIL 648 or PHIL 650 or PHIL 654. LEC
PHIL 831 Hegel (3). Prerequisite: PHIL 560 or PHIL 612 or PHIL 640 or 500-600 level course specified as appropriate. 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 650 or PHIL 654. LEC
PHIL 843 Heidegger (3). Prerequisite: PHIL 560 or PHIL 562 or PHIL 570 or PHIL 582 or PHIL 592. LEC
PHIL 848 Wittgenstein (3). Prerequisite: PHIL 628 or PHIL 630 or PHIL 638 or PHIL 654. LEC

PHIL 855 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 the timetable. Prerequisite: 500-600 level course specified as appropriate. 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 620 or PHIL 628 or PHIL 638. 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 PHIL 666. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 620 or PHIL 628 or PHIL 648 or PHIL 650. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 610 or PHIL 628 or PHIL 630. 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 628 or PHIL 638 or PHIL 654. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 620 or PHIL 630 or PHIL 648 or PHIL 650 or PHIL 654. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 620 or PHIL 648 or PHIL 650 or PHIL 654. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 638 or PHIL 650 or PHIL 654. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 670 or PHIL 672. LEC

PHIL 881 Topics in the Philosophy or Art: (3). This course discusses recent analytical theories of art and will focus on the ontological status of art, truth and representation, and/or the perception of art. Prerequisite: PHIL 662 or 500-600 level specified as appropriate. 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, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 670 or PHIL 672 or 500-600 level specified as appropriate. 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), and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisite to be announced in the timetable. Prerequisite: PHIL 670 or PHIL 672 or 500-600 level specified as appropriate. 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 timetable. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 666 or PHIL 696. 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. RSH

PHIL 900 Research in Philosophy: (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. RSH

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. RSH

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. RSH

Physics and Astronomy

Chair: Stephen Sanders
Associate Chair: Robin E. P. Davis
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7582, (785) 864-4626
www.physics.ku.edu

Graduate Adviser: Alice Bean,
1077 Malott Hall, (785) 864-4742

Professors: Anmar, Anthony-Tvarog, Armstrong, Baringer, Bean, Besson, Cravens, Davis, Han, Kwak, McKay, Melott, Rashon, Sanders, Shandarin, Shaw, Tvarog, Wu

Professors Emeriti: Bearse, Culvahouse, Davidson, Eagleman, Friauf, Goldhammer, Krone, Munczek, Prosser, Sapp, Wiseman, Wong

Associate Professors: Braaten, Feldman, Shi, Tucker
Associate Professor Emeritus: Enoch
Assistant Professors: Medvedev, Murray, J. Olafsen, L. Olafsen, Wilson
Adjunct Assistant Professors: Ashman, Farrar, Laird
Courtesy Appointments: Dreschhoff, McElwee, Steepeles

Admission
Ordinarily, admission requires an undergraduate grade-point average of at least B (3.0 on a 4.0 scale), overall and in the proposed major. A baccalaureate degree with a major in physics is desirable but not required. Recommended preparation for graduate study 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 to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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

Also, a minimum of 2 hours in PHSX 899 Master’s Research/Thesis is required, with a maximum of 6 hours that can be counted toward the master’s degree. A candidate who has not had an advanced undergraduate laboratory course (junior/senior level) must take one of the four advanced laboratory courses offered in the department.

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. Subspecialty 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/ASTR 815
- Computational Physics and Astronomy
- PHSX 718 Mathematical Methods in Physical Sciences
- MATH 781/EECS 781 Numerical Analysis I
- ECECS (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 is required.

PHSX 899 Master’s Research/Thesis

B. Twelve or more credit hours from the following list:

Note: A course used to fulfill a requirement under A (e.g., EECS 448) may not also be counted under B.
- *EECS 360 Signal and System Analysis (3)
- *EECS 386 Functional Programming (3)
- *EECS 388 Computer Systems and Assembly Language (4)
- EECS 448 Software Engineering I (3)
- EECS 560 Data Structures (3)
- EECS 672 Introduction to Computer Graphics (3)
- EECS 848 Software Engineering II (3)
- MATH 596, MATH 696, or MATH 796 Special Topics (3)

MATH 614 Fourier Analysis of Time Series (1)
MATH 627 Probability (3)
MATH 647 Applied Partial Differential Equations (3)
MATH 782/EECS 782 Numerical Analysis II (3)
MATH 783 Applied Numerical Methods for Partial Differential Equations (3)

PHSX/ASTR/ATMO courses numbered 500 or above (3)

*Courses below the 500 level do not count toward the required 30 hours of graduate credit.

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. The student is assumed to 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 courses must include the following:

Four courses chosen from the following: (12 credit hours)

- GEOL 311 Mineralogy (3)
- 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 Physics of the Earth/GEOL 573 Geodynamics and Plate Tectonics (3)
- ATMO 660 Advanced Dynamic Meteorology (3)
- PHSX 795 Space Plasma Physics (3)
- ATMO 642 Remote Sensing of the Atmosphere (3)
- ATMO 650 Advanced Synoptic Meteorology (3)

*May not be taken for graduate credit.

Each of the following courses:

- GEOL 572 Geophysics (3)
- PHSX 523 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):

PHSX 815 Computational Methods in Physical Sciences (3)
PHSX 722/GEOL 772 Geophysical Data Analysis (3)
PHSX 722/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 Graduate School 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 12 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 Test of Spoken English or 240 on the SPEAK. 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 seven 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 these departmental requirements:

1. All four sections of the preliminary examination must be passed. A student who sends in an original copy of a physics Graduate Record Examination score of 60 percent or higher before enrollment is excused from the examination. The preliminary examination is administered each August before the beginning of fall semester. Students may repeat the examination once and must satisfy this requirement by the fifth semester of enrollment. The four sections cover mechanics, electricity and magnetism, quantum mechanics, thermal and statistical physics, and wave phenomena. The level is advanced undergraduate (600-level KU courses). Example questions are available.

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 831 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 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 715 Mathematical Methods in Physical Sciences
   - PHSX 815 Computational Methods in Physical Sciences (satisfies FLORS requirement)
   - PHSX 871 Statistical Physics I
   - PHSX 951 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 one of the four advanced laboratory courses. Other experimental work (e.g., senior thesis or undergraduate research) may be considered for this requirement.

   - PHSX 516 Physical Measurements I
   - PHSX 526 Electronic Circuits and Measurements
   - PHSX 616 Physical Measurements II
   - PHSX 836 Electronics Design

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 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 signifi-
cant 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 the Graduate School. One member must be from outside the department. Requests to take the exam must be made at least three weeks before the examination. The student writes a 2,000- to 4,000-word paper relevant to the 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. The Graduate School designates the candidate’s dissertation committee, based on department recommendations. The committee establishes core 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 Graduate School to schedule the final oral examination. This request must be made two weeks before the examination. The Graduate School appoints the committee, but 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. The candidate must deposit two unbound copies of the dissertation with the Graduate School and one copy in the department office by the final date for meeting requirements.

Engineering Physics
Chair: Raymond Ammar, 1082 Malott Hall, (785) 864-4626

No graduate program in engineering physics is offered. Courses at the 500 and 600 levels carry graduate credit. Courses abbreviated EPHX 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 595 Astrophysics and Planetology (3).
ASTR 596 Observational Astrophysics (1-3).
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.) 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

Atmospheric Science Courses
ATMO 505 Weather Forecasting (3).
ATMO 515 Energy and Water Balance (3).
ATMO 521 Microclimatology (3).
ATMO 525 Air Pollution Meteorology (3).
ATMO 605 Forecasting Practicum - Radio (2).
ATMO 606 Forecasting Practicum - Television (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 of the Atmosphere (3).
ATMO 650 Advanced Synoptic Meteorology (3).
ATMO 660 Advanced Dynamic Meteorology (3).
ATMO 680 Physical Meteorology (3).
ATMO 690 Special Problems in Meteorology (2).
ATMO 697 Seminar for Seniors (1).
ATMO 699 Undergraduate Research (2).
ATMO 720 Atmospheric Modeling (3). Illustration and application of contemporary approaches to mathematical and statistical description of atmospheric phenomena. Prerequisite: MATH 122, ATMO 640, and a course in statistics, or consent of instructor. LEC
ATMO 727 Atmospheric Storms (3). The physical processes and operating principles involved in the development and life cycles of extreme or unusual weather events including tornadoes, blizzards, lightning displays, and tropical storms. Prerequisite: EECS 150, MATH 121, and ATMO 320. 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). RSH

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 514 Science Communications to Non-Technical Populations (3).
PHSX 516 Physical Measurements I (3).
PHSX 523 Mechanics I (3).
PHSX 524 Mechanics II (3).
PHSX 528 Physics of the Earth (3).
PHSX 531 Electricity and Magnetism (3).
PHSX 536 Electrical Circuits and Measurements (3).
PHSX 593 Gravitation and Cosmology (3).
PHSX 594 Cosmology and Culture (3).
PHSX 601 Design of Physical Systems I (3).
PHSX 611 Introductory Quantum Mechanics (3).
PHSX 615 Numerical and Computational Methods in Physics (3).
Particle physicists at KU 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.
Physiology and Cell Biology
See Biological Sciences: Molecular Biosciences.

Polish
See Slavic Languages and Literatures.

Political Science
See Government: Political Science.

Psychology
Chair: Gregory Simpson, gsimpson@ku.edu
Fraser Hall, 1415 Jayhawk Blvd., Room 426
Lawrence, KS 66045-7556, (785) 864-4131
www.psych.ku.edu

Professors: Batson, Bernstein, Biernat, Branscombe, Colombo, Denney, Embretson, Higgins, Holmes, Juola, Kellas, Kemper, McCluskey-Fawcett, Muehlenhard, Roberts, Simpson, Snyder, Vernberg, Wrightsman

Professors Emeriti: Baumgartel, Brehm, Crockett, Cromwell, Gump, Hallenbeck, Neuringer, Rosenfeld, Shontz, Wright

Associate Professors: P. Atchley, Crandall, Gallant, Ilardi, Jackson, Karpowitz, Little, Schreiber

Assistant Professors: Adams, R. Atchley, Finger, Grobe, Hawley, Steele

Assistant Professors Emeriti: Reilly, Townsend

The department offers a single doctoral degree in psychology, which may be earned in social, cognitive, quantitative, 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 January 15 for the following fall semester. January 1 is the deadline for students seeking university-wide fellowships or other financial assistance.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 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 in the program. These plans indicate how the student proposes to fulfill the requirements for the M.A. and Ph.D. degrees, including all requirements and condi-
Psychology

The University of Kansas enrolls more than 28,000 students.

An interdepartmental program in clinical child psychology is available. See Clinical Child Psychology in this chapter of the catalog for information.

Social Psychology. The major research interests of faculty members are attitudes and attitude change, social influence, affect and motivation, empathy and altruism, person perception, prejudice and stereotyping, social stigma, interpersonal relations, intergroup relations, and the psychology of law.

Students should be involved continuously in 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 programs.

Requirements. Students are guided by individually tailored plans. These are 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. The plan specifies students' long-range goals; specialties; other fields of psychology or related disciplines in which they will become proficient; research skills; sequence of courses, research, and teaching experiences they hope to follow; examinations; and an approximate timetable. Details can be changed by agreement of the student and the committee. The plan is a general framework that permits students' graduate work to be adapted to their interests and abilities and provides a standard against which their progress can be assessed.

Students' plans must specify how the Graduate School research skills requirement is to be met and provide for taking the comprehensive oral examination within the time limits set by the department.

Cognitive Psychology. The program seeks students who can engage in productive scholarship in a basic or applied area of interest. Interdisciplinary training is available in child language, aging and cognition, and 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 basic and applied research settings. Areas of focus are memory, language, perception, attention, problem-solving, reasoning, decision-making, aging, and cognition, as well as life-span development.

Each student develops an agreement with the faculty that includes a statement of goals, how they are to be achieved, and methods of evaluation. The student meets with faculty members to select an adviser. The student and the adviser develop a contract and recruit two additional faculty members for the student's advisory committee. All Graduate School requirements must be met, including residence, foreign language or research skills, and time limits. Meeting requirements is the student's responsibility.

Statistics and Methodology (minimum of 12 hours, all required).

PSYC 700 Statistical Methods in Psychology I
PSYC 791 Statistical Methods in Psychology II
PSYC 982 Issues in Scientific Conduct
PSYC 983 Methodology

Content Core (minimum of 9 hours).

PSYC 723 Advanced Cognitive Psychology

Plus two of the following:

PSYC 735 Psycholinguistics
PSYC 757 Theories of Perception
PSYC 851 Advanced Human Learning and Memory
PSYC 725 Cognitive Neuroscience

Advanced Issues (minimum of 12 hours, four required).

PSYC 800 (A, B, C, D)

Breadth/Depth (minimum of 12 hours, all required).

Breadth I and II
Depth I and II

Statistics/methodology, content core, and advanced course requirements should be met by the end of the third year. PSYC 723 is taught every fall and is prerequisite to PSYC 800. Content core courses other than PSYC 723 are taught in spring semester. One PSYC 800 seminar course is offered each semester. Students take four consecutive seminars starting in the second year. Breadth courses may come from a number of sources depending on student interests and adviser suggestions. Students are expected to be engaged in research throughout the program.

Quantitative Psychology. The program trains psychologists who can interface quantitative methods with psychology. Graduates are trained as quantitative specialists with substantial background in psychology. Current interests include psychometric methods, item response theory, structural equation modeling, multivariate statistics and mathematical modeling, as well as other topics in psychological methods and statistics.

Graduates find employment in academic programs, basic research units in academic or organizational settings, or applied research and consulting. Nearly all graduates proceed directly to full-time employment. About half the positions are academic. Quantitative psychologists with technical expertise have a special edge in the job market.

Requirements (88 hours).

Quantitative foundations .......................................................... 6
Methodology ................................................................. 3
Quantitative core ......................................................... 12
Quantitative breadth (minimum requirement) ......................... 9
Related field .............................................................. 6
Substantive psychology breadth (two different areas) ............... 6
Substantive psychology depth (same area) .............................. 6
Proseminar ............................................................................. 10
M.A. thesis ........................................................................... 9
Dissertation ................................................................. 12
Independent study .............................................................. 9

The substantive breadth requirement is met by courses in two substantive areas of psychology (e.g., cognitive psychology, social psychology, psychopathology, health psychology, or developmental psychology). The substantive depth requirement is met by two more courses in one of the breadth areas.

All Graduate School requirements must be met, including an M.A., foreign language or research skills, oral comprehensive examination, dissertation, and final defense. The FLORS requirement typically is met by demonstrating competence in a computational language that enables specialized studies in quantitative methods. The dissertation and thesis may be an empirical study of a quantitative issue, an original quantitative development, such as a model or estimation methods, or a cutting-edge application that interfaces psychological issues with quantitative methods. A written comprehensive examination or a comprehensive review paper is required.

Clinical Psychology. The program educates students about the content issues that define a minimum knowledge base and the processes of learning and problem-solving. All students take basic course work and practice in both academic/research and clinical application. Students may take elective course work or practica to augment either aspect of training. About half of 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). A detailed overview is available from the graduate admission secretary or online at www.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.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 are

**General Core Requirements for Clinical Psychology (12-15 hours).**

- **Quantitative Analysis of Behavior.**
  - PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance
  - PSYC 791 Statistical Methods in Psychology II or PRE 904 Regression Analysis

  Completion of option a or option b:
  a. Computer knowledge, demonstrated by one of the following:
     - Completion of PSYC 795 Computing and Psychology, HDFL 725 Topics in Research in Child Development: Statistical Software Packages, or PRE 903 Computer Applications for Statistical Analyses;
     - A minimum of 18 clock hours of workshops including use of one of the major electronic mail systems, use of the World Wide Web, beginning and advanced data management through a spreadsheet or database system, introductory statistical analysis package (e.g., SPSS/Windows), and advanced statistical analysis package (e.g., SPSS/Windows);
     - Documentation of previous comparable coursework or workshop experience; or
  b. One 3-hour advanced graduate course in research methodology other than PSYC 968 or statistics other than the two required introductory courses.

- **Cognitive Bases of Behavior.** One course from the following:
  - PSYC 721 Advanced Cognitive Psychology
  - PSYC 800 Experimental Psychology
  - PSYC 831 Advanced Human Learning and Memory
  - PSYC 870/HDFL 870 Cognitive Development
  - PRE 807 Theories and Research in Human Learning

- **Social Bases of Behavior.** One course from the following:
  - PSYC 774 Advanced Social Psychology I
  - PSYC 775 Advanced Social Psychology II (Current Issues)
  - PSYC 777 Social Psychology: Theory, Research, and Clinical Applications

**Clinical Requirements (48 hours).** Eight content courses.

- PSYC 805 History of Psychology
- PSYC 888 Diversity Issues in Clinical Psychology or PRE 875 Cross Cultural Counseling
- PSYC 946 Critical Psychotherapy
- PSYC 949 Emotionally Supported Treatment
- 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

**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.

**Eight Semesters of Core Practicum Course Work.**

- PSYC 850 Psychological Clinic I: Abilities Assessment
- PSYC 855 Psychological Clinic II: Personality Assessment
- PSYC 875 Psychological Clinic IV: Integration of Assessment Techniques

- Psychological Clinic V: Two semesters of supervised practicum experience in the Psychological Clinic or in other approved clinical settings. (PSYC 964 fall semester, PSYC 965 spring semester)
- Psychological Clinic VI: Three semesters of more advanced practicum training at the above settings. (PSYC 969 summer session and fall semester, PSYC 970 spring semester. Summer PSYC 989 is taken between the second and third years.)

**Research Skill Proficiency.** This requirement is normally 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 904 Regression Analysis, PSYC 791 Statistical Methods in Psychology I, and PSYC 968 Research Methods in Clinical Psychology. Because these courses are required elsewhere in the curriculum, they do not represent additional required hours.

- Thesis and Dissertation (19 hours). The student must complete a master’s thesis based on an empirical study (minimum of 6 hours) and an empirical doctoral dissertation (minimum of 12 hours) and defend each in separate oral examinations. The thesis should be completed by the end of the second year and written in a form suitable for journal submission. In the first semester of the first year, students must take PSYC 898 Thesis Proseminar in Clinical Psychology, in which faculty members describe their research programs.

**Electives/Independent Study (minimum of 15 credit hours).** Because a minimum of 97 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 his or her adviser.

- Examinations: Task. Each student must propose and demonstrate competence in one task or project. This task typically is done in the third year. It may be in applied/c clinical research/methodology, or teaching. A complete description is available from the clinic office or online at www.ku.edu/~clinprog.

**Upon completion of all requirements for the degree 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.

**Clinical Child Psychology**

For information on this degree, see Clinical Child Psychology in this chapter of the catalog.

**Counseling Psychology**

For information on this degree, see Psychology and Research in Education in the School of Education chapter of this catalog.

**Developmental and Child Psychology**

For information on this degree, see Human Development and Family Life in this chapter of the catalog.

- **Psychology Courses**
  - PSYC 500 Intermediate Statistics in Psychological Research (3).
  - PSYC 502 Human Sexuality (3).
  - PSYC 506 Psychology and the Actor (3).
  - PSYC 510 Infant Behavior and Development (0-3).
  - 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 556 Psychology and the Law (3).
  - PSYC 570 Group Dynamics (3).
  - PSYC 571 Violence, Aggression, and Terrorism in the Modern World (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 602 Basis and Nature of Individuality (3).
PSYC 604 Psychological Tests (3).
PSYC 605 Health Psychology (3).
PSYC 608 Sex Role Development (3).
PSYC 610 Advanced Personality (3).
PSYC 612 Foundations of Motivation (3).
PSYC 613 Social Psychology 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: Personality (6).
PSYC 626 Psychology of Adolescence (3).
PSYC 628 Psychology of Personality (3).
PSYC 632 Advanced Child Behavior and Development (3).
PSYC 641 Behaviorism (3).
PSYC 642 The Psychology of Families (3).
PSYC 652 Behavior Therapy (3).
PSYC 660 Values and Caring (3).
PSYC 662 Industrial and Organizational Psychology (3).
PSYC 668 Fundamentals of Psychoanalytic Psychology (3).
PSYC 670 Theories of Personality (3).
PSYC 678 Drugs and Behavior (3).
PSYC 685 Human Factors Psychology (3).
PSYC 690 Seminar: (1-5).
PSYC 691 The Psychology of Aging (3).
PSYC 704 Special Topics in Clinical Child Psychology I: Diversity and Social Interventions (2). Coverage of two significant aspects of training, research, and services for children and families: (a) ethnic and cultural diversity issues and, (b) social policy and system intervention. Includes didactic and experiential activities. (Same as HDFL 704.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. LEC
PSYC 706 Special Topics in Clinical Child Psychology II: Public Sector Mental Health and Prevention (2). Coverage of significant aspects of training, research, and services for children and families: (a) public sector mental health/rural mental health, and consultation issues, and (b) prevention of mental and physical problems. (Same as HDFL 706.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. 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 nonessential 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, consent 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 neuronal 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 processing 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. May be repeated for different topics. (Same as LING 737.) Prerequisite: PSYC 735/LING 725 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 and sexual orientation as well as the complex of behaviors that are related to sexual orientation and 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, smell, pain, and other sensations 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 766 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 analysis of theoretical and methodological approaches to 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 physical manifestations of health and disease for the graduate student in health and psychology. Content areas include: a general overview of normal anatomy and physiology of the body, description of how deviations from normal anatomical development and physiological function result in common disorders, methods for distinguishing physiological 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 783 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. Prerequisite: PSYC 791 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 COMS 784.) (Same as SPHL 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 AMS 767, COMS 787, HDFL 787, and SOC 767.) LEC
PSYC 790 Statistical Methods in Psychology I (3). Elementary distribution theory; one-way analysis of variance, linear trends, contrasts, post hoc tests; simple regression and correlation; general linear model. Prerequisite: A beginning course in statistics and graduate standing, or consent of instructor. LEC
PSYC 791 Statistical Methods in Psychology II (3). Continuation of PSYC 790. Multivariate analysis of variance for crossed, nested, and incomplete designs; analysis of covariance; multiple regression and correlation; general linear model. Prerequisite: PSYC 790 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 is 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 syntax and semantics of such languages as PASCAL and C. Lectures and assignments emphasize applications. Included are techniques of automated data collection, database management, and simulation. Prerequisite: PSYC 790 or consent of instructor. LEC
PSYC 796 Computer Models of Brain and Behavior (3). An introduction to the techniques of computer modeling with applications in the study 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 thresholds, feedback, dynamic equilibrium, redundancy, plasticity, network structure, and similar constructs. Programming skill in a high-level language available on personal computers or mainframe is
required. Prerequisite: EECS 128 or EECS 138 or PSYC 795, and 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 language "C Plus Plus". Applications to psychological research will include artificial neural network design, simulation modeling, and real-time stimulus-response management. Familiarity with a high-level structured programming language such as Pascal or "C", and with the DOS operating system on desktop computers will be helpful. Prerequisite: PSYC 795 or an equivalent course or experience. LEC

PSYC 798 Introduction to Mathematical Methods in Psychology (3). A first course in scaling and modeling psychological processes. Substantive areas treated selected from sensation, perception, learning, memory, preference, choice and decision making, 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, a course in statistics, and a course in calculus. LEC

PSYC 799 Proseminar in Child Language (2). A review and discussion of current issues in children's language acquisition. May be repeated for credit. Students will be graded S/F. (Same as HDFL 797, LING 790 and SPLH 790). LEC

PSYC 800 Experimental Psychology: Child (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 801 Social-Psychological Aspects of Health, Disability, and Association with Life Stress (3). Disabling myocardial 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 core course for graduate students in psychology. LEC

PSYC 802 Social-Psychological Aspects of Health, Disability, and Association with Life Stress (3). Disabling myocardial 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 core course for graduate students in psychology. LEC

PSYC 803 Psychological Aspects of Aging (3). A first course in scaling and modeling psychological processes. Substantive areas treated selected from sensation, perception, learning, memory, preference, choice and decision making, 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, a course in statistics, and a course in calculus. LEC

PSYC 804 Psychological Aspects of Aging (3). A first course in scaling and modeling psychological processes. Substantive areas treated selected from sensation, perception, learning, memory, preference, choice and decision making, 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, a course in statistics, and a course in calculus. 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 HDFL 809.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. LEC

PSYC 810 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 HDFL 810.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. LEC

PSYC 811 Developmental Research Proseminar (1-3). A proseminar, conducted jointly by the staffs of the Developmental and Child Psychology Ph.D. training program. This course prepares students for the areas of developmental psychology. Students will be drawn from the staffs of the two departments, from visiting scientists, and from the graduate students enrolled in the program. The proseminar will present both the current research areas of importance in developmental psychology and the students' and staff's own research as related to such areas. (Same as HDFL 811.) Prerequisite: Graduate standing in the Developmental and Child Psychology program, or consent of instructor. LEC

PSYC 812 Developmental Research Proseminar (1-3). A proseminar, conducted jointly by the staffs of the Developmental and Child Psychology Ph.D. training program. This course prepares students for the areas of developmental psychology. Students will be drawn from the staffs of the two departments, from visiting scientists, and from the graduate students enrolled in the program. The proseminar will present both the current research areas of importance in developmental psychology and the students' and staff's own research as related to such areas. (Same as HDFL 812.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. LEC

PSYC 813 Developmental Research Proseminar (1-3). A proseminar, conducted jointly by the staffs of the Developmental and Child Psychology Ph.D. training program. This course prepares students for the areas of developmental psychology. Students will be drawn from the staffs of the two departments, from visiting scientists, and from the graduate students enrolled in the program. The proseminar will present both the current research areas of importance in developmental psychology and the students' and staff's own research as related to such areas. (Same as HDFL 813.) Prerequisite: Graduate standing in the Developmen tal and Child Psychology program, or consent of instructor. LEC

PSYC 814 Advanced Child and Family Assessment (3). Lecture, laboratory, field work, and supervision appointment. Supervised experience in specialized psychological assessment approaches for children and families. Emphasis on interviewing, observation, psychometric scales, and consultation. Rationale, administration, analysis, and reporting of mental health functioning of children and families. Experience with clinical populations, and communication with referral sources. (Same as HDFL 814.) Prerequisite: Graduate student in clinical child psychology or consent of instructor. LEC

PSYC 815 Design and Analysis for Developmental Research (3). Coverage of the philosophy and basic principles of experimental 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 concurrently with the design of individual differences analyses and statistical control issues are also addressed. (Same as HDFL 815.) LEC

PSYC 816 Experimental Research Methods in Social Psychology (3). Systematic and critical discussion 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 817 Field and Evaluation Research Methods in Social Psychology (3). Basic principles and practices of field and applied 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; the role of the scientist; the role of the professional. (Same as HDFL 820.) Prerequisite: Graduate student in field and evaluation research methods in social psychology or equivalent. LEC

PSYC 818 Field and Evaluation Research Methods in Social Psychology (3). Basic principles and practices of field and applied 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; the role of the scientist; the role of the professional. (Same as HDFL 820.) Prerequisite: Graduate student in field and evaluation research methods in social psychology or equivalent. LEC

PSYC 819 Field and Evaluation Research Methods in Social Psychology (3). Basic principles and practices of field and applied 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; the role of the scientist; the role of the professional. (Same as HDFL 820.) Prerequisite: Graduate student in field and evaluation research methods in social psychology or equivalent. LEC

PSYC 820 Advanced Child Development (3). A survey of the major, 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 one another, and their implications for social application are addressed. (Same as HDFL 820.) Prerequisite: Undergraduate child development course or equivalent. LEC

PSYC 821 Behavior Analysis of Child Development (3). An advanced seminar on the behavior analysis approach to child development. The course addresses (a) the history and philosophy of the approach as it relates to other developmental systems; (b) the current conceptual and empirical behavior-analytic literature as it relates to the general developmental literature (e.g., motor, emotional, social, and cognitive development); (c) the inherent contextualism within the contemporary behavior analysis; and (d) the implications of the aforementioned for application. (Same as HDFL 821.) Prerequisite: HDFL 796 and HDFL 798, or consent of instructor. LEC

PSYC 822 Advanced Human Learning and Memory (3). An in-depth analysis of current research and theoretical focus. Focus will be on experimental methodology in these areas. LEC

PSYC 823 Clinical Health Psychology I: Health Promotion and Disease Prevention (3). An overview of the field of health psychology as applied to health promotion and disease prevention. Emphasis will include history 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 health psychology or health-related fields, or by permission of instructor. LEC

PSYC 824 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 prevention 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 825 Psychological Clinic VI: Health Psychology Practicum (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, and rehabilitation. Prerequisite: Graduate student in clinical health psychology specialty. LEC

PSYC 826 Psychological Clinic VI: Health Psychology Practicum (3). Continuation of PSYC 825. Prerequisite: Graduate student in clini cal health psychology specialty. LEC

PSYC 827 Proseminar in Health Psychology I (1). Discussion of current theoretical, empirical, and applied issues in health psychology involving students, faculty, and guest speakers. Prerequisite: Graduate student in clinical health psychology specialty. LEC

PSYC 828 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 also will 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 829 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. 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 highlighted, as will new developments in group, patient, and family care. Prerequisite: An introductory course in health psychology or consent of instructor. LEC

PSYC 830 Psychology of Women's Health (3). A seminar devoted to examination 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 behav-
KU's Language Acquisition Program is a center for research in language acquisition.

KU’s doctoral program in clinical psychology ranked 19th in the nation in the 2004 edition of U.S. News America’s Best Graduate Schools.
early stimulation, reinforcement, and modification as each affects the
course of the development of children. (Same as HDFL 923.) LEC
PSYC 925 Proseminar in Rehabilitation Psychology (1). A seminar
involving graduate students and faculty to discuss research reports
and significant issues in the field of rehabilitation psychology. LEC
PSYC 926 Rehabilitation Problems in Field Settings: Practicum (3).
Provides students with opportunities to aid in solving real-life
problems confronted by hospitals and agencies concerned with rehabilita-
tion of persons with physical and mental disabilities. Theory, substan-
tive knowledge, value, and reality considerations are brought to bear
upon the solutions considered. FLD
PSYC 927 Seminar in Psychobiology (3). A detailed study of a spe-
cific research area dealing with the biological foundations of behavior.
Each week articles will be assigned from the journal literature. LEC
PSYC 930 Research Seminar on Intimate Relationships (3). Consid-
eration 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
ongoing empirical research in the area. Prerequisite: Graduate level
courses in research design and statistics. LEC
PSYC 931 Advanced Topics in Behaviorism: (1-4). An ad-
vanced seminar on the philosophy, concepts, and principles of behav-
iorism. The seminar will provide in-depth reading and discussion on
both theoretical and empirical issues. Emphasis will be placed on read-
ing primary sources. May be repeated for up to ten hours. Prerequi-
site: Consent of instructor. RSH
PSYC 933 Seminar: The Measurement of Attitudes (3). An examina-
tion of the concept of attitude and the methods developed to assess the
various aspects of attitudes. Prerequisite: PSYC 578 or consent of in-
structor. 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. Ad-
vanced psychological intervention techniques for children, youth, and
families; supervised progressive experience in application of behav-
ioral and psychotherapeutic methods to behavioral and emotional
problems. Graded on satisfactory/fail basis. (Same as HDFL 943.) Pre-
request: HDFL 846 or PSYC 846, and HDFL 847 or PSYC 847, or con-
sent of instructor. FLD
PSYC 944 Advanced Practicum in Clinical Child Psychology IV (1-3).
A continuation of HDFL 943 and PSYC 943. Graded on satisfactory/fail
basis. (Same as HDFL 944.) Prerequisite: HDFL 843 or PSYC 843, or
consent of instructor. FLD
PSYC 945 Proseminar in Clinical Psychology (1). A weekly meeting
of students and faculty members in the graduate program in clinical
psychology in which students will discuss their thesis and dissertation
proposals and results, and faculty, and guest speakers will lead discussions of
significant current issues in clinical psychology. Prerequisite: Graduate standing in clinical psychology. LEC
PSYC 946 Clinical Psychotherapy (3). Basic considerations in the
therapeutic relationship. Technical aspects of various psychotherapeu-
tic approaches, comparative psychotherapy, laboratory experiences in
interviewing. Prerequisite: Nine hours in graduate psychology. LEC
PSYC 947 Advanced Practicum in Clinical Child Psychology V (1-3).
A continuation of HDFL 944 and PSYC 944. May be taken in more than
one semester. Graded on satisfactory/fail basis. (Same as HDFL 947.) Pre-
request: HDFL 944 or PSYC 944, or consent of instructor. FLD
PSYC 949 Empirically Supported Treatment (3). This course pro-
vides an overview of theoretical and applied issues germane to the con-
temporary empirically supported treatments movement in clinical psy-
chology. 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," as well as the attention accorded to implementation of the characteristic techniques of
such interventions. LEC
PSYC 960 Advanced Psychopathology (3). Review of current nosol-
ogy of adult psychopathological syndromes emphasizing development of
diagnostic skills. Critical survey of recent research and theory re-
lated to the etiology, course, prognosis, and treatment of adult psy-
chopathological conditions. Prerequisite: Graduate student status in a
clinical psychology, clinical child psychology, or counseling psychol-
ogy. LEC
PSYC 961 Biological Foundations of Psychopathology (3). A review of
fundamental topics in the neurosciences and their relevance to se-
lected 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 in-
structor. LEC
PSYC 962 Advanced Personality (3). A survey of selected advanced
topics in the area of personality. Includes review of theoretical and re-
search issues in the area of personality. Prerequisite: Consent of in-
structor. LEC
PSYC 963 Clinical Child Psychology Internship (1). Three consecu-
tive enrollments, covering a minimum of eleven months of experience
in an approved clinical psychology field setting; supervision by quali-
ﬁed clinical child psychology faculty and ﬁeld staff clinicians. Required
of all clinical child psychology program students. An intensive guided
experience in application of clinical child psychology theory, methods,
and practices. Integrates scientiﬁc and clinical aspects of ﬁeld. (Same
as HDFL 963.) Prerequisite: Completion of Ph.D. comprehensive ex-
aminations and consent of clinical child psychology faculty. FLD
PSYC 964 Psychological Clinic V (3). Lecture, laboratory and field
work, and supervision appointment. Psychological evaluation and
clinical guidance of individuals, couples, families, and groups; supervised,
progressive experience in psychological treatment and in the clinical
evaluation of intellectual, personality, and social functioning. Grading
on Satisfactory/Fail basis. Prerequisite: PSYC 860 or consent of instruc-
tor. LEC
PSYC 965 Psychological Clinic V (3). A continuation of PSYC 964.
Grading on Satisfactory/Fail basis. 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 design; selection and
assessment strategies, and methods of evaluating the results. The
principles, pitfalls, artifacts, biases, and sources of controversy in re-
search in this area are also covered. Prerequisite: Graduate standing in
clinical or counseling psychology. LEC
PSYC 969 Psychological Clinic VI (3). Lecture, laboratory and field
work, and supervision appointment. Advanced psychological treatment
of the individual, couple, family, and group client; supervised, progres-
sive experience in the clinical application of psychotherapeutic treat-
ment methods. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 964
and PSYC 965. FLD
PSYC 970 Psychological Clinic VI (3). A continuation of PSYC 969.
Grading on Satisfactory/Fail basis. FLD
PSYC 971 Psychological Clinic VII (3). Community mental health
clinical practices. Approaches to community mental health problems
with emphasis upon the theory and techniques of clinical consultation,
program planning, and community mental health education. May be
taken for more than one semester. Class work and practicum experi-
ence. Prerequisite: PSYC 969 and PSYC 970. FLD
PSYC 972 Psychological Clinic VIII (2-5). Special clinical problems
in the evaluation of the exceptional individual. Practicum experience in
use of special clinical techniques with exceptional children. Espe-
cially recommended for those training for guidance clinic or hospital work
with children. May be taken in three different semesters. Prerequisite:
PSYC 955. FLD
PSYC 973 Clinical and Experimental Hypnosis (3). Theory and prac-
tice of hypnotic techniques in clinical and research applications; analy-
sis and critique of clinical and experimental literature; supervised labo-
atory and practicum experience. Prerequisite: PSYC 853, PSYC 946
and consent of instructor. LEC
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; supervision by clinical psy-
chology faculty and field staff psychologists. Required of all
clinical psychology program students. An intensive guided experi-
ence in the application of clinical psychology theory, methods, and prac-
tices. An emphasis upon the relationships between scientific and clini-
cal functions. Integrations between research and clinical practice.
Prerequisite: Completion of Ph.D. comprehensive examinations and con-
sent of clinical psychology faculty. LEC
PSYC 975 Professional and Ethical Problems in Clinical Psychology
(3). Interprofessional relationships, case security, legal aspects, ethical
code of practice, clinic administration, and problems in the clinical
practice of psychology. Issues in professional 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 special emphasis on research findings and laboratory (practicum) experience. A survey of
relationship therapies, operant strategies, systemic approaches, parent
education and play therapy by the right therapist for a specific child
with a particular problem. Prerequisite: 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
The Office of
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.

Public Administration
See Government: Public Administration.

Radio-Television-Film
For information on programs in film/video studies, see Theatre and Film in this chapter of the catalog.

For information on programs in broadcast journalism, see the School of Journalism and Mass Communications chapter of this catalog.
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:

- Religion in the Ancient Near East and Mediterranean.
- Religion in Asia.
- Religion in Western Europe.
- Religion in the U.S.A.
- Religious Ethics.
- Theories and Methods of Studying Religion and Religious Experience.
- Religion in the Middle East and North Africa.

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. Candidates 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 students wish 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) Students must complete REL 601 Approaches to the Study of Religion the first year in the program.
   (e) Students must complete REL 780 Seminar in Theories of Religious Experience or REL 781 Seminar in Theories of Religion. Students should complete the prerequisite 12 hours of undergraduate courses in religious studies before taking REL 601, REL 780, or REL 781.
   (f) Students must complete one course from each of these groups:
   A. Western Religious Tradition
   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 722 Seminar in Western Religious Texts: ______
   REL 761 Seminar in Western Religious Thought: ______
   REL 775 Seminar in Religion and Society in the West: ______
   B. Non-Western Religious Tradition
   REL 507 Religion in India
   REL 508 Religion in China
   REL 509 Religion in Japan
   REL 733 Seminar in Eastern Religious Texts: ______
   REL 762 Seminar in Eastern Religious Thought: ______
   REL 776 Seminar in Religion and Society in Asia: ______
   (g) Students must complete 9 hours in courses numbered 700 or above, excluding REL 800 Readings and REL 899 Thesis. Courses at the 700 level in religious studies are seminars that include the following elements: at least one session devoted to a discussion of methods of study, completion of a major research paper of at least 25 pages, an oral defense and presentation of student research during the semester for which the student was first enrolled in the class, a limit of 15 students in the class, and permission of the instructor for undergraduates.
   2. Students 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. At least two weeks before the scheduled oral defense, the student and adviser must submit a Do-all form to the Graduate School.
   3. Students must write and successfully defend a thesis that meets the minimum requirements of the department and the Graduate School. 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.

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. Candidates 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) (Same as thesis option, above).
   (c) (Same as thesis option, above).
   (d) (Same as thesis option, above).
   (e) (Same as thesis option, above).
   (f) (Same as thesis option, above).
   (g) (Same as thesis option, above).

   2. Students 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. At least two weeks before the scheduled oral defense, the student and adviser must submit a Do-all form to the Graduate School.

Transfer of Credit

The graduate school permits the transfer of graduate 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 to the Graduate School for approval.

Hebrew Courses

HEBR 500 Biblical Hebrew (3).
HEBR 501 Biblical Hebrew II (3).

Religious Studies Courses

REL 500 Readings in Non-English Religious Texts (1-4).
REL 504 Millenarian Movements (3).
REL 507 Religion in India (3) NW.
REL 508 Religion in China (3) NW.
REL 509 Religion in Japan (3) NW.
REL 512 Prophecy, Poetry, and Story in the Hebrew Bible (Old Testament) (3).
REL 515 Studies in Early Christian Literature and History (3).
REL 523 The Dead Sea Scrolls (3).
REL 524 Studies in Ancient Egyptian Culture and Religion (3).
REL 525 Jews and Christians in Greco-Roman Antiquity (3).
REL 526 Jewish History and Literature in the Greek and Roman Periods (3).
REL 530 Christian Origins: from the Beginnings to Augustine (3).
REL 531 Studies in Christianity (3).
REL 532 Studies in Islam (3).
REL 535 The History of Islam in Africa (3).
REL 539 Greek and Roman Religion (3).
REL 558 Religion in Britain Since the Reformation: A Survey (3).
REL 559 Religion in Britain Since the Reformation: A Survey, Honors (3).
REL 570 Studies in Judaism (3).
REL 580 Religious Perspectives on Illness, Health, and Healing (3).
REL 581 Psychology of Religion (3).
REL 585 New Religious Movements (Western) (3).
REL 586 New Religious Movements (Nonwestern) (3).
REL 601 Approaches to the Study of Religion (3).
REL 602 Special Topics in Religion: _____ (1-4).
REL 604 Religion and Political Theory (3).
REL 665 Religious Ethics (3).
REL 667 Religious Perspectives on War and Peace (3).
REL 669 Human Conflict and Peace (3).
REL 671 The Communitarian Tradition (3).
REL 672 Mother as Religious Metaphor (3).
REL 677 Women in Christianity (3).
REL 722 Seminar in Western Religious Texts: (3). An analysis of selected religious text or texts from Judaism, Islam, or Christianity in translation. May be taken more than once if subject matter varies sufficiently. Prerequisite: REL 512, REL 515, REL 526, REL 530, REL 535, REL 539, or REL 570 or permission of the instructor. LEC.
REL 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 EALC 733.) Prerequisite: REL 507, REL 508, REL 509, or permission of instructor. LEC.
REL 761 Seminar in Western Religious Thought: _____ (3). An analysis of the thought of selected thinkers of the Christian, Jewish, and/or Islamic traditions. May be taken more than once if subject matter varies sufficiently. Prerequisite: REL 512, REL 515, REL 526, REL 530, REL 535, REL 539, or REL 570 or permission of the instructor. LEC.
REL 762 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 EALC 762.) 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 the 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 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 535, REL 539, or REL 570 or permission of the instructor. LEC.
REL 776 Seminar in Religion and Society in Asia: (3). Analysis of selected Asian religions and their relationship 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 the instructor. LEC.
REL 777 Seminar in Women and Religion: _____ (3). An examination of symbols, images, scriptures, rites, and teachings defining women's roles in various religious traditions. May be taken more than once if subject matter varies sufficiently. 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 Timetable 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 Timetable 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 Timetable 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 Timetable 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). RSH.

Russian and East European Studies

Chair: Paul D’Anieri, crees@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574, (785) 864-4236
www.ku.edu/~crees


Professors Emeriti: Cinciala, Dardess, Garland, Greaves, Maurer, Piekalkiewicz, Shaffer, Stammer, Stokstad

Associate Professors: Christilles, Comer, D’Anieri, Earnhart, Plipps, Volek

Assistant Professors: Hanley, Herron, Karcz, Radovanovic, A. Tsiovkh, Y. Tsiovkh, Weaver

Librarians: Anderson, Haines, Husic, Schaffner

Admission

Most applicants hold the B.A. degree 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 Russian and East European studies in conjunction with academic or professional study in another department or school.

Students should submit the following application materials:
1. An application form for admission to the Graduate School.
2. A nonrefundable application fee (check payable to the University of Kansas, see page 195).
3. Two original transcripts of all college-level work.
4. Graduate Record Examination scores. International students should submit TOEFL scores.
5. Three letters of recommendation commenting on the student's ability to succeed at graduate work.
6. A one- to two-page statement of the student’s educational and professional objectives.

Students may begin the program in any semester. Admissions continue throughout the year.
Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to:
The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements
A Master of Arts degree is awarded in Russian and East European studies in three tracks: Russian, East European, and Ukrainian.

Requirements for the degree are:
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, an interdisciplinary M.A. seminar (6 credit hours). In this two-semester course, students learn about issues in the field and research methodologies and write a paper using Russian, Croatian, Polish, Ukrainian, or other approved language materials. Before enrolling for REES 899, a student must have completed a total of 22 hours (three years), or the equivalent, of the target language.

Course Groupings
I. Literature and the Arts.
II. History.
III. Political Science and Sociology.
IV. Philosophy and Religion.
V. Economics, Business, and Geography.

Every graduate degree candidate at KU must pass a comprehensive examination, in addition to the regular course examinations, by the final date for meeting degree requirements set by the Graduate School.
Information about opportunities and requirements for graduate work with a Russian or Eastern European concentration in any department of the university may be obtained from the department.
Requirements may be modified in special cases with the chair’s approval, particularly for students with special needs such as Experienced Teacher Fellows, Foreign Area Officers, or candidates for degrees in professional schools. All students are encouraged to study abroad.

● Russian and East European Studies Courses

REES 704 Church History of Russia I (3). A study of Russia’s religious development since the introduction of Christianity through the religious schism. Prerequisite: Five hours of principal courses in history: LEC
REES 709 Church History of Russia II (3). A study of Russia’s religious development from the schism through the Soviet period. LEC
REES 714 Church-State Relations in the U.S.S.R. (3). Survey of church-state relations 1917 to the present; anti-religious programs and policies; law; nonorthodox religions; religious dissent; religion and Soviet foreign policy. LEC
REES 715 Seminar in the History of Russian Thought (3). Topics in the development of social radicalism and of philosophical positivism and materialism from Radishchev through the Russian Marxists. A reading knowledge of Russian is desirable but not required. Prerequisite: REES 725 or PHIL 580. LEC
REES 799 Directed Readings in Russian and East European Studies (1-5). RSH
REES 895 Special Problems in Area Studies: _____ (3). Interdisciplinary examination of topics involving two or more of the cooperating disciplines in Russian and East European studies. LEC
REES 897 Research (1). Enrollment to fulfill Masters continuous enrollment rule. Graded on satisfactory/unsatisfactory basis. 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). An interdisciplinary seminar. Each student will be expected to write an interdisciplinary seminar paper, involving the use of materials in an East European language and concentrated in the discipline of the student’s special interest. A grade will be assigned only on satisfactory completion of REES 899. LEC
REES 899 Seminar in Russian and East European Studies (3). Continuation of REES 898. LEC

The following courses are cross-referenced as available to or recommended for students in Russian and East European Studies:

CRSB 504 Advanced Croatian and Serbian I
CRSB 508 Advanced Croatian and Serbian II
CRSB 675 Readings in Croatian and Serbian
CZCH 675 Readings in Czech
ECON 560 Economic Systems
ECON 562 The Russian Economy
ECON 563 Current Economic Issues of East Europe
ECON 880 Selected Topics in Economic Theory: _____
GEOG 505 Geography of the former Soviet Union
GEOG 590 Geography of Eastern Europe
GEOG 795 European Regions: _____
HIST 510 Topics in: _____
HIST 547 Nationalism and Communism in East Central Europe from 1772 to the Present
HIST 555 Imperial Russia and the Soviet Union
HIST 566 Russia in the 18th Century, 1680-1801
HIST 567 Oil, The Great Powers, and the Persian Gulf, 1900 to the Present
HIST 568 Russia in the 20th Century
HIST 569 The Middle East in the 19th and 20th Centuries
HIST 570 The Middle East Since World War II
HIST 592 Huns, Turks, and Mongols: The Nomad Factor in History
HIST 606 Seminar in: _____
HIST 608 Readings in: _____
HIST 647 Colloquium in Modern Russian History
HIST 648 Colloquium in 20th Century Russia
HIST 649 Seminar in Modern Russian History
PHIL 580 Marxism
PHIL 608 Main Currents of Russian Thought II
PHIL 850 Topics in Recent Philosophy: _____
POLS 504 Advanced Polish I
POLS 508 Advanced Polish II
POLS 675 Readings in Polish Language and Literature
POLS 609 Topics in Political Theory: _____
POLS 652 Politics in Western Europe
POLS 654 Politics and Government of Russia and the Central Eurasian States
POLS 655 Politics of East-Central Europe
POLS 669 Topics in Comparative Politics: _____
POLS 671 International Cooperation
POLS 672 International Political Economy
POLS 675 Russian Foreign Policy
POLS 679 International Conflict
POLS 753 Politics of Ideocracy
POLS 775 Russian Foreign Policy
POLS 935 Ideocratic Politics
POLS 934 Politics in Post-Soviet States
POLS 973 International Political Economy
POLS 975 Foreign Policies of Post-Soviet States
RUSS 504 Advanced Russian I
RUSS 508 Advanced Russian II
RUSS 512 Russian for the Professions I
RUSS 516 Russian for the Professions II
RUSS 522 Problems in Translating Russian into English I
RUSS 526 Problems in Translating Russian into English II
RUSS 550 Advanced Conversation, Composition, and Grammar in Russian: Summer Program
RUSS 552 Advanced Russian Language at Saint Petersburg University: Summer Program
RUSS 604 Contemporary Russian Culture
RUSS 608 Russian Phonetics and Grammar
RUSS 675 Readings in Russian
SLAV 500 Russia Today
SLAV 502 Introduction to Russian Culture and Society: _____
SLAV 504 Introduction to East-Central European Culture and Society: _____
Slavic Languages and Literatures

Chair: Marc L. Greenberg
Wescoe Hall, 1445 Jayhawk Blvd., Room 2134
Lawrence, KS 66045-7590, (785) 864-3313
www.ku.edu/~slavic

Director of Graduate Studies: Stephen J. Parker, 2388 Wescoe Hall, (785) 864-2346

Professors: Carlson, Clowes, Conrad, Greenberg, Mikkelson, Parker

Professors Emeriti: Kuhlke, Maurer, Stammmler

Associate Professor: Comer

Assistant Professor: Karcz

The department offers full programs leading to the degrees of Master of Arts and Doctor of Philosophy with a major in Slavic languages and literatures. Two concentrations are offered in the M.A. program: a concentration in Slavic languages and literatures and a concentration in Russian language and civilization. Four concentrations are offered in the Ph.D. program: concentrations in Russian, Polish, and South Slavic literatures, and a concentration in Slavic linguistics. Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

M.A. Degree Requirements

Concentration in Slavic Languages and Literatures. Prerequisites for Admission: 30 semester hours of credit in Russian language and literature (of which 10 to 12 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 the student who plans to continue toward the doctorate, the M.A. examination also functions as a qualifying examination. In this case, the written and oral examinations are both of greater length. The function of the qualifying examination is to ascertain the student's general competence and to identify areas in which further work is needed.

Students planning to continue toward the doctorate should begin study of a second Slavic language during the first year of graduate work. Such study does not count toward M.A. degree requirements.

Concentration in Russian Language and Civilization. This is a master's degree program, focusing on Russian language, literature, and general culture, for people who plan to teach Russian language and culture at the high school level, as well as to enter careers in other fields. Although the program is not intended for those planning to continue to the Ph.D. degree, it can lead to qualifying for admission to the Ph.D. concentrations in Slavic literatures or linguistics, with appropriate additional courses.

Prerequisites: Twenty-two semester credit hours of Russian language courses and 3 hours of Russian studies other than language.

Degree Requirements:
1. At least 30 hours of graduate work including
   • Nine hours of Russian language at the advanced level (6 hours of practical Russian chosen from SLAV 506, SLAV 508, SLAV 520, SLAV 524, SLAV 612, SLAV 616, or RUSS 604-RUSS 608; 3 hours of Russian linguistics chosen from phonetics, morphology, syntax, introduction to history of Russian, OCR, etc.)
   • Nine hours of Russian literature (including work in prose and poetry, surveys and more specialized courses)
   • Three hours in an interdisciplinary course from the following list: SLAV 502 Introduction to Russian Culture and Society, SLAV 512 Siberia Yesterday and Today, SLAV 600 Biography of a City:
   • Nine hours of Russian literature (including work in prose and poetry, surveys and more specialized courses)
The Ph.D. program with concentration in Slavic literature or Slavic linguistics includes, in addition to M.A. requirements, completion of the Ph.D. qualifying examination, fulfillment of all specific requirements in the concentration, the foreign language or research skill requirement in a Western European language, completion of comprehensive examinations, and a dissertation. All doctoral 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 Concentration in Literature
- 1. Detailed knowledge of the history and development of one Slavic language.
- 2. Oral and written competence in the student’s major Slavic language plus an orientation in its structure and history.
- 3. Reading competence in at least one additional Slavic language and a general knowledge of the history of its literature.
- 4. About 9 to 12 graduate semester credit hours in a minor subject, taken either from outside or inside the Department of Slavic Languages and Literatures.
- 5. An acceptable dissertation.

Requirements for Concentration in Linguistics
- 1. 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.
- 2. Oral and written competence in the student’s major Slavic language.
- 3. About 10 to 12 graduate semester credit hours in a minor subject, taken either from outside or inside the Department of Slavic Languages and Literatures.
- 4. Basic knowledge of general linguistics and comparative Slavic linguistics.
- 5. An acceptable dissertation.

Examinations. All prospective Ph.D. aspirants must take a qualifying examination. For KU students, the master’s examination is adjusted to serve as the qualifying examination. For students beginning their work here but with the M.A. from another institution, a qualifying examination is required. This examination consists of two three-hour sessions (written) and a two-hour oral examination. Successful completion of this requirement admits the student to aspirancy for the Ph.D. with a major in Slavic languages and literatures.

Before taking the Ph.D. comprehensive examination, the student must demonstrate reading competence in a Western European language, preferably French or German, to satisfy the foreign language or research skills requirement.

Students must take written and oral comprehensive examinations after all other requirements for the Ph.D. are fulfilled, except the dissertation.

There is a final oral examination (defense) on the candidate’s dissertation and its field.

Slavic Language Programs in Russia and Eastern Europe
KU conducts a five-week summer language program in Russia. Students may take intermediate or advanced Croatian and Serbian at a six-week summer institute in Croatia or attend a summer language program in Poland. An academic year in Poland is available for the advanced student of Polish language and area studies. Graduate students at KU are encouraged to participate.

- **Croatian and Serbian Courses**
  - CRSB 504 Advanced Croatian and Serbian I (3).
  - CRSB 508 Advanced Croatian and Serbian II (3).
  - CRSB 675 Readings in Croatian and 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**
  - RUS 504 Advanced Russian I (3).
  - RUS 508 Advanced Russian II (3).
  - RUS 512 Russian for the Professions I (3).
  - RUS 516 Russian for the Professions II (3).
  - RUS 522 Problems in Translating Russian into English I (3).
  - RUS 526 Problems in Translating Russian into English II (3).
  - RUS 550 Advanced Conversation, Composition, and Grammar in Russian: Summer Program (6).
  - RUS 552 Advanced Russian Language at Saint Petersburg University: Semester Program (14).
  - RUS 604 Contemporary Russian Culture (3).
  - RUS 608 Russian Phonetics and Grammar (3).
  - RUS 612 Introduction to Russian Literature (3).
  - RUS 616 Stylistics (3).
  - RUS 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 504 Introduction to East-Central European Culture and Society: _____ (3).
  - SLAV 506 Polish Literature and Civilization (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 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 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).
KU's Department of Sociology offered the first course in the nation in the field now called women's studies.

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.

Slavic Languages & Literatures

SLAV 566 The Devil in Russian Literature (3).
SLAV 600 Biography of a City: _____ (2-4).
SLAV 612 Introduction to Russian Literature of the Nineteenth Century (3).
SLAV 614 Russian Literature in Translation: _______________ (3).
SLAV 616 Introduction to Russian Literature of the Twentieth Century (3).
SLAV 630 Slavic Folklore (3).
SLAV 642 Pushkin and Evgenij Onegin (3).
SLAV 650 The Russian Short Story (3).
SLAV 656 Russian Literature of the Eighteenth Century (3).
SLAV 660 Nineteenth Century Russian Prose and Fiction (3).
SLAV 662 Russian Literary Modernism: 1880-1930 (3).
SLAV 664 Soviet Russian Literature: 1930 to the Present (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 linguistics 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 their 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 Eighteenth and Nineteenth 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. Readings in Russian. Prerequisite: Three years of Russian or the equivalent. LEC
SLAV 727 Bely and Blok (3). A study of the life and works of Symbolist writers, Andrei Bely and Aleksandr Blok. Readings in Russian. LEC
SLAV 728 19th Century Russian Prose (3). Readings from the works of Turgenev, Chekhov, Lev Tolstoy, 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 Empire Literature (3). A study of representative works in all genres, by Russian emigre 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-12th 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 introduction of skills 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 language from its beginnings to the 17th century through close reading of Old and Middle Russian texts and reading and discussion of the literature on issues in Russian historical linguistics. Prerequisite: SLAV 748, SLAV 750, or equivalent. LEC
SLAV 756 Structure of Russian (3). A study of the contemporary Russian language with special emphasis on functional morphology and syntax. Prerequisite: Three years of Russian language study or its equivalent. LEC
SLAV 802 Thesis (1-6). RSH
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 Eighteenth Century Russian Literature (3). A survey of Russian literature and thought of the eighteenth century. All readings in Russian. Prerequisite: Graduate standing in Russian. LEC
SLAV 824 Proseminar in Methods of Teaching Slavic Languages (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 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 825 Investigation and Conference (1-3). Individual work in language or literature of the teaching of Slavic languages by qualified students under direction of members of the department. RSH
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 theoretical 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 criticism, literary analysis, and research. Prerequisite: Graduate standing in Slavic Languages and Literature, or permission of instructor. LEC
SLAV 852 Seminar in Russian Literature: Twentieth Century (3). Various topics including pre- and post-Revolutionary poetry, the prose of the 1920s, the development of Socialist Realism, individual authors, etc. LEC
SLAV 912 Seminar: Topics in Contemporary Slavic Linguistics (3). Synchronic 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 examination 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 intellectual 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 popular genres, e.g., byliny, slavkiz, zagadki, etc. Prerequisite: SLAV 630. LEC
SLAV 940 Seminar: Topics in Comparative Slavic Literature (3). Prerequisite: Graduate standing in Slavic Languages and Literatures. LEC
SLAV 999 Dissertation (1-6). RSH

The following course is cross-referenced as available to or recommended for students in Slavic Languages and Literatures: THF& 702 Graduate Seminar in: • 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: Shirley A. Hill
Fraser Hall, 1415 Jayhawk Blvd., Room 716
Lawrence, KS 66045-7556, www.ku.edu/~socdept
(785) 864-4111, fax: (785) 864-5280

Professors: Antonio, Ekerdt, Nagel, Staples, Warren, Yetman, Zimmerman
Adjunct Professor: Rosenthal
Professor Emeritus: Warriner
Associate Professors: Albrecht, Arnold, Hanley, Harkess, Hill, Mennerick, Najafizadeh, Smith, Sprague
Assistant Professors: Cardenas, Donovan, 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 for admission are 15 hours of credit in sociology, a course in sociological theory, and a sociology course in statistics. Applications for admission must include scores on the Graduate Record Examination aptitude tests for all those whose native language is English and for all applicants who have degrees from colleges or universities at which English is the medium of instruction. International applicants must submit both Test of English as a Foreign Language scores and GRE scores. Applications also must include a statement of academic interests and professional goals, three letters of recommendation, two complete sets of transcripts from all colleges and universities attended, a current résumé/curriculum vitae, a writing sample, and a nonrefundable application fee (see page 195). The potential student's record should indicate considerable academic ability and a high level of motivation.

Submit your application to the Graduate School online at www.graduated.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 including the courses above under thesis option) and must prepare 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.

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 and other research skills 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.
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.
The KU academic year in Costa Rica is the oldest continuously operated university exchange program between a U.S. and a Latin American university.

KU's library collection on Central America is one of the top three in the nation.
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 services issues such as measuring quality of care, understanding the role of social factors in the etiology of disease, determining the health status and health needs of populations, and incorporating health services research into organizational policy and decision-making. (Same as HP&M 821.) Prerequisite: PRE 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 care settings, models of illness behavior and health services utilization, the interorganizational environment of the 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 or ANTH 108 or ANTH 308, plus junior-senior or graduate student standing. LEC

SOC 873 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, 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). The course will acquaint students with recent developments in the global economy, including its impact on politics and society. Topics include theories of globalization, the role of the nation-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 by 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 content, 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 899 Thesis (1-8). RSH

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 Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 910 Seminar on Special Topics in Methods: _____ (1-4). Each seminar will explore problems of methods in sociology. Topic, instructor, and hours of credit will be announced in the Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 920 Seminar on Special Topics in Social Organizations: _____ (1-4). Each seminar will explore problems of social organization in sociology. Topic, instructor, and hours of credit will be announced in the Timetable. 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 Timetable. 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 hours of credit will be announced in the Timetable. 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 Timetable. 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 Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

Spanish and Portuguese

Chair: Danny J. Anderson
Graduate Student Admissions: Isidro Rivera
Director of Graduate Studies: Jill Kuhnheim
Wescoe Hall, 1445 Jayhawk Blvd., Room 3062
Lawrence, KS 66045-7590, (785) 864-3851
www.ku.edu/~spanport

Professors: Anderson, Debicki, Doudoroff, Spires, Woodyard

Professors Emeriti: Brushwood, Chamberlin, Johnson, Souza

Associate Professors: Kuhnheim, Mayhew, Rivera, Simões, Skinner, Unruh

Associate Professor Emeritus: Weiss

Assistant Professors: Manning, Rego

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 departmental office. 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.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.A. Degree Requirements

The Department offers the M.A. degree with a concentration in literature or linguistics/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 (see below), and must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall.

2. The selection committee gives strong consideration to letters of recommendation, the breadth and depth of preparation, and Graduate Record Examination scores, if available. Deficiencies in preparation specified by the selection committee may be made up early in the graduate program, although the time required to complete the degree is correspondingly greater.

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.

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.
   (a) Language and Culture (12 hours), including courses in phonetics and the structure of Spanish if they have not been taken at the undergraduate level.
   (b) Literature (12 hours), including at least 3 credit hours of course work in each of the three major genres (fiction, theatre, poetry). One course in this category must be a seminar.
   (c) One additional course in the department (3 hours) in any field.
   (d) One graduate-level course (3 hours) in a second language (excluding PORT 611).

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 the general requirements of the Graduate School.
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 Graduate School’s general requirements for the Doctor of Philosophy degree in the General Information chapter of this catalog.

Graduate Experience Abroad
Graduate students have the opportunity to teach and conduct research during the summer session in Guadalajara, Mexico; or Barcelona, Spain. The department also has a graduate student exchange agreement with the University of Santiago de Compostela, Spain.

● Portuguese Courses
PORT 509 Phonetics (3).
PORT 560 Survey of Portuguese Literature (3).
PORT 611 Accelerated Basic Portuguese for Spanish Speakers (3).
PORT 612 Accelerated Basic Portuguese for Spanish Speakers II (3).
PORT 740 Survey of Brazilian Literature (3). A survey of Brazilian literature from 1500 to present. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
PORT 742 The Brazilian Novel (3). The development of the novel in Brazil and analysis of representative works of the nineteenth and twentieth centuries. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
PORT 746 The Brazilian Short Story (3). The development of the short story in Brazil and analysis of representative works of the nineteenth and twentieth centuries. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
PORT 750 Brazilian Poetry (3). A study of the principal movements and an analysis of representative works from the colonial period to the present. Emphasis on modernists and post-modernists. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
PORT 760 Contemporary Brazilian Literature (3). A survey of Brazilian literature in the 20th century with emphasis on developments since the advent of Modernism. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
PORT 780 Special Readings in Portuguese and Brazilian Literature (1-3). May be taken more than once; total credit not to exceed five hours. Directed private readings with conferences with instructor. Prerequisite: Consent of department. LEC
PORT 930 Seminar In Portuguese Literature: _____ (3). LEC
PORT 970 Seminar in Brazilian Literature: _____ (3). LEC

● 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: _____ (3).
SPAN 550 Colloquium on Spanish Film (3).
SPAN 560 Colloquium on Latin American Film (3).
SPAN 566 Latin American Folklore (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 literature taught in Spanish. LEC
SPAN 730 Literature of Thirteenth- and Fourteenth-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 late 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 Fifteenth-Century Castile (3). Survey of the poetry and prose of the fifteenth century with particular attention to the literature produced during the reign of...
SPAN 739 Spanish Drama of the Golden Age (3). Selected plays of such authors as Lope de Vega, Alarcón, Góngora de Molina, Calderón, and Moreto. Prerequisite: A survey course in Spanish literature from its beginning through the present, or graduate standing. LEC

SPAN 740 Lope de Vega and His School (3). Intensive study of selected works by Lope de Vega, Tirso de Molina, Guzmán de Castro, Mira de Amescua, and Ruiz de Alarcon. 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 Cervantés. 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 19th 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 19th Century Spanish Drama (3). A survey of the main currents and aesthetics in the nineteenth-century Spanish theatre: NeoClassicism, Romanticism, Costumbrismo, Realism (Alta Costumbría), Neoromanticism, and the innovations of Galdós and Benavente. Prerequisite: A survey course in Spanish literature from the 19th century to the present. LEC

SPAN 761 20th Century Spanish Drama (3). A survey of major plays and playwrights of 20th century Spain with reference to critical theory as 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 the literature of Spain of the 19th, 20th, and 21st centuries. 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 766 The 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 phonics. 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 survey course 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 literary culture of Spanish America from the Iberian indigenous encounter until Independence. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 782 Spanish-American Prose Fiction: (3). A survey by region or country (Mexican Prose Fiction, Caribbean Prose Fiction, Argentine Prose Fiction, Brazilian 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 region or country. Prerequisite: A survey course in Spanish American literature. LEC

SPAN 783 Spanish-American Modernism (3). A study of the poetry and prose of the modernist movement in Spanish America. Prerequisite: A survey of Spanish American literature from Marti to the present. 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 survey course in Spanish American literature. LEC

SPAN 790 Spanish Linguistics: Theories and Application to Teaching (3). An introduction to and applied linguistics focused on the phonology, morphology, and syntax of Spanish, including work in tagmics and transformational grammar. Prerequisite: A course in Spanish teaching. 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 teaching assistants 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. 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 style. Prerequisite: A course in Spanish phonetics. LEC

SPAN 988 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. RSH

SPAN 995 Seminar: Spanish Essay: (3). Prerequisite: A general survey course in Spanish literature. LEC

SPAN 999 Dissertation (1-12). RSH
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 and Film
Chair: John Sweets
Murphy Hall, 1530 Naismith Dr., Room 356
Lawrence, KS 66045-3102, (785) 864-3511
www.ku.edu/~kuthf

Director of Graduate Studies: Tamara Falicov
Oldfather Studios, 1621 West 9th St.
Lawrence, KS 66044, (785) 749-1130, tfalicov@ku.edu

Professors: Berg, Gronbeck-Tedesco, Meier, Reaney, Small, Unruh, Wright

Professors Emeriti: Davis, Findlay, Kuhlke, Linton, Willis

Associate Professors: Ajayi-Soyinka, Christilles, Klein, Preston, Ringer, Staninnas, Tibbetts

Assistant Professors: Falicov, Jacobson, Leon, Willmott, Ybarra

Affiliated Lecturer: Ukpongodu

Admission
Submit your application to the Graduate School online at www.graduate.ku.edu. For more information regarding the application process, visit our website or call the Graduate School at (785) 864-5311.

The Lied Center Series includes the Concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and the Lied Family Series, bringing outstanding performers to KU each year.

M.A. Degree Requirements
Normally candidates for the master’s degree elect one of these emphases: general theatre studies, children’s theatre, international theatre, or film and video. Whatever the emphasis, the candidate’s program begins with the core requirements listed below and culminates in a thesis. To be admitted, a student must have a cumulative undergraduate grade-point average of at least 3.2 and at least 3.5 in previous graduate work and a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 600 (analytical). To complete the M.A., the student must sustain a grade-point average of 3.0 or higher through 30 graduate credit hours.

M.A. in Theatre
General Theatre Studies (30 hours).

Department Core. To be taken the first semester in residence:

TH&F 800 Introduction to Graduate Study in Theatre and Film .................. 3

TH&F 609 Play Directing ........................................................................... 3

TH&F 715 Problems and Techniques of Direction .................................. 3

In special cases, with the explicit consent of the head of graduate studies, one or more of the following 3-hour courses may be substituted:

TH&F 518 Scenography I (3)
TH&F 708 Dramatic Script Writing (3)
TH&F 799 Advanced Dramatic Script Writing (3)
TH&F 815 Advanced Play Production (3)

Theatre Studies. Five 3-hour courses in dramatic literature, history, theory and/or criticism numbered TH&F 700 or above. Examples include TH&F 702 Graduate Seminar (e.g., dramaturgy), TH&F 826 Seminar in African Theatre, TH&F 917 Dramatic Theory I, TH&F 918 Dramatic Theory II.

Master’s Thesis.
TH&F 899 Master’s Thesis .................................................................. 6

International Theatre (30 hours). The program includes required courses and a master’s thesis, as described under General Theatre Studies above, with graduate courses in the student’s international interest. With the explicit consent of the director of graduate studies, students may take electives at the graduate level from other departments.

Children’s Theatre (30 hours). The program includes required courses and a master’s thesis, as described under General Theatre Studies above, with graduate courses in children’s drama/theatre.

With the explicit consent of the director of graduate studies, students may take electives at the graduate level from other departments.

M.A. in Film and Video

Department Core. To be taken the first semester in residence:

TH&F 800 Introduction to Graduate Study in Theatre and Film .................. 3

Film and Video Core. Studies:

TH&F 583 Film Theory ........................................................................... 3

TH&F 584 Film Theory and Criticism, 1960-Present ............................... 3

Production:

TH&F 875 Problems in Video Production (Special Topics): ____________ (3)

TH&F 876 Problems in Film Production (Special Topics): _______________ (3)

Plus one additional course chosen with an adviser __________________________ 3

Areas of Concentration. Choose 9 hours of courses from one of the following four categories: _____________________________________________ 9

A. History and Theory

TH&F 563 Experimental Film and Video (3)

TH&F 684 Documentary Film and Video (3)

TH&F 881 Development of the Silent Film (3)

TH&F 882 Development of the American Sound Film (3)

TH&F 883 Development of the International Sound Film (3)

TH&F 885 Latin American Film (3)

An appropriate TH&F 902 Film Seminar in: ____________________________ (3)

One elective in film history or theory (3)

B. International Film and Video

TH&F 883 Development of the International Sound Film (3)

TH&F 885 Latin American Film (3)

One elective chosen with the graduate adviser from the film and culture sequences offered, for example, by French and Italian or African and African-American Studies, or an appropriate TH&F 902 Film Seminar in: ____________________________ (3)

C. Practical Criticism

TH&F 686 American Film Criticism (3)

One elective from the TH&F 880 sequence in American Popular Culture (3)

One elective from the following list (3):

TH&F 593 Experimental Film and Video

TH&F 684 Documentary Film and Video

TH&F 881 Development of the Silent Film

TH&F 882 Development of the American Sound Film

TH&F 883 Development of the International Sound Film

TH&F 885 Latin American Film (3)

An appropriate TH&F 902 Film Seminar in: ____________________________ (3)

D. Production: Theory and Practice

Two electives from the following list (6):

TH&F 576 Animation

TH&F 702 Graduate Seminar in Screenwriting

TH&F 875 Problems in Video Production (Special Topics): _______________ (3)

TH&F 876 Problems in Film Production (Special Topics): _______________ (3)

One elective from the following list (3):

TH&F 593 Experimental Film and Video

TH&F 684 Documentary Film and Video

TH&F 881 Development of the Silent Film

TH&F 882 Development of the American Sound Film

TH&F 883 Development of the International Sound Film

TH&F 885 Latin American Film (3)

Master’s Thesis.
TH&F 899 Master’s Thesis .................................................................. 6
M.F.A. 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 both projects and realized 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 also 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 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 Requirements
- ADS 810 Orientation Seminar: 1
- ADS 730 Directed Reading in Design: 2

Concentration Requirements
- TH&F 518 Scenography I: 3
- TH&F 519 Scenography II: 3
- TH&F 618 Scenography III: 3
- TH&F 619 Scenography IV: 3
- TH&F 818 Scenography V: 3
- TH&F 719 M.F.A. Production Seminar: 6
- TH&F 819 Advanced M.F.A. Production Seminar: 6
- TH&F 802 Master's Projects: 6
- TH&F 899 Master's Thesis: 2
- Electives: no limit, but a minimum of 21 hours for a total of 60 hours

Ph.D. Degree Requirements

The Ph.D. in theatre and film is an academic degree, but students must demonstrate competence in at least one production area.

To be admitted, a student must have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 600 (analytical), 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 a student's background may require make-up work.

Students may follow a theatre concentration, a film concentration or a combination of the two. Concentrations and other requirements are outlined below:

Core Requirements
- TH&F 801 Colloquium on Theatre/Film (to be taken sequentially, one each semester in residence): 4
- TH&F 815 Advanced Play Production (for those emphasizing theatre): 3
- TH&F 876 Problems in Film Production (Special Topics): 3
- A non-Western theatre or film course at the graduate level: 3

Concentration Requirements

Theatre
- TH&F 915 Modern Theatre and Drama: 3
- TH&F 916 Postmodern Theatre and Drama: 3
- TH&F 917 Dramatic Theory I: 3
- TH&F 918 Dramatic Theory II: 3
- TH&F 828 Seminar in American Theatre and Drama to 1895: 3
- TH&F 829 Seminar in American Theatre and Drama from 1895: 3
- TH&F 916 Postmodern Theatre and Drama: 3
- Six hours of production courses selected with the adviser (These must be at the graduate level and may come before satisfying TH&F 815 requirements.): 6
- A minimum of 6 hours of electives from within the department at the 800 and 900 level (These should be selected with the adviser to reflect the student's special interest. The adviser may increase the number of hours, depending on the student's needs.): 6

Film
- TH&F 881 Development of the Silent Film: 3
- TH&F 882 Development of the American Sound Film: 3
- TH&F 883 Development of the International Sound Film: 3

TH&F 902 Film Seminar in: _____: 3
- Six more graduate hours of production courses selected with the adviser: 6
- A minimum of 9 hours of electives from within the department at the 800 and 900 level (These should be selected with the adviser to reflect the student's special interest. The adviser may increase the number of hours, depending on the student's needs.): 9

Cognate Requirements. Six to 12 hours from outside the department. These hours must be on the student's emphasis and expand his or her understanding or methodological areas or both.

FLORS Requirements. The student must demonstrate proficiency in one foreign language or competence for use as research tools in two foreign languages. For one of the languages under the second option, the student may substitute a research skill pertinent to the specialty (e.g., computer language, American Sign Language).

Successful Completion of the Comprehensive Examination

Successful Completion of a Dissertation and Its Defense. See also the Graduate School's general requirements for the Doctor of Philosophy degree in the General Information chapter of this catalog.

Theatre and Film Courses
- TH&F 501 Colloquium on American Theatre/Film (1).
- TH&F 506 Psychology and the Actor (3).
- TH&F 509 Script Analysis (3).
- TH&F 512 A Vocal Approach to the Classics (3).
- TH&F 516 Scenic Painting Techniques (3).
- TH&F 517 Computer-Aided Design for Theatre, Film, and Video (3).
- TH&F 518 Scenography I (3).
- TH&F 519 Scenography II (3).
- TH&F 520 History of Period Style I (3).
- TH&F 521 History of Period Style II (3).
- TH&F 525 Theatre in Western Civilization to 1642 (3).
- TH&F 526 Theatre in Western Civilization from 1642 (3).
- TH&F 527 Asian Theatre and Film (3) NW.
- TH&F 528 History of American Theatre and Drama (3).
- TH&F 529 Race and the American Theatre (3).
- TH&F 530 African Film and Video (3) NW.
- TH&F 576 Animation (3).
- TH&F 583 Film Theory (3).
- TH&F 584 Film Theory and Criticism, 1960-Present (3).
- TH&F 585 Latin American Film (3).
- TH&F 587 Studies in Approaches to Classical Film (3).
- TH&F 593 Experimental Film and Video (3).
- TH&F 599 Special Topics in Scenography (1-6).
- TH&F 603 Theatre for Young Audiences (3).
- TH&F 604 Drama With Young People (1-3).
- TH&F 609 Play Directing (3).
- TH&F 617 Computer-Aided Design for Theatre, Film, and Video II (3).
- TH&F 618 Scenography III (3).
- TH&F 619 Scenography IV (3).
- TH&F 626 Myth and the Dramatist (3).
- TH&F 675 Advanced Video Production (3).
- TH&F 676 Advanced Film Production (3).
- TH&F 677 Advanced Audio Production (3).
- TH&F 680 Film and Video Performance Techniques (3).
- TH&F 684 Documentary Film and Video (3).
- TH&F 686 American Film Criticism (3).
- TH&F 702 Graduate Seminar in: _____ (1-3). Course organized any given semester to study particular subject matter or to take advantage of special competency by an individual faculty member. Topics change as needs and resources develop. Class discussion, readings, and individual projects. Prerequisite: Consent of instructor. LEC
- TH&F 703 Readings in Dramatic Literature (1-3). Survey of selected dramatic literature and commentaries. May be repeated up to a total of six credits on petition. LEC
TH&F 707 Theatre or Film Internship (3-12). Study with an approved theatre or film company. Emphasis may be in one or all of the following areas: acting, directing, writing, stage management, technical theatre, production management. No more than six hours may be applied to an M.A. degree. Course will be graded satisfactory/unsatisfactory. Prerequisite: Consent of instructor. LEC TH&F 708 Dramatic Script Writing (3). Study and practice in the fundamental techniques of dramatic writing and the application of such techniques most specifically to theatre but also to film, television, and radio. Open upon consent of instructor to students who have completed one course in advanced composition and one course in the theory of history of drama or film. LEC TH&F 709 Advanced Dramatic Script Writing (3). The purpose of this course is to permit selected students, by consent of instructor, to develop or continue dramatic writing projects in theatre, film, television, and radio under the individual supervision of the instructor. LEC TH&F 710 Styles of Acting: Classical Japanese (3). A study of acting styles associated with traditional theatrical genres in Japan: no, kyo-gens, and kabuki. Exercises in changing and movements, and rehearsal of selected scenes. (Same as EALC 710.) LEC TH&F 710 Styles of Acting: Shakespearean (3). An approach to acting styles of the period, based on a study of the art, customs, spirit, and the theatre of the times applied to scene studies taken from the works of Shakespeare. Prerequisite: TH&F 700 and TH&F 706 or consent of instructor. LEC TH&F 711 Styles of Acting: Restoration and 18th Century English (3). An approach to acting styles of the period, based on a study of the art, customs, spirit, and the theatre of the times applied to scene studies taken from the works of English Restoration dramatists and those 18th century English playwrights writing in the Restoration mode. Prerequisite: TH&F 706 and TH&F 706 or consent of instructor. LEC TH&F 714 Study in Masks and Martial Arts (3). Studies the use of masks as a means of developing the expressiveness of the body; also provides study in selected Oriental martial arts such as Tai-chi, K-Aikido, and Karate to help develop concentration, focus of energy, and physical coordination as means of increasing the effectiveness of expression. (Same as DANC 740.) LEC TH&F 715 Problems and Techniques of Direction (3). Practical experience in directing. Prerequisite: TH&F 609, LEC TH&F 719 M.F.A. Production Seminar (3). To be taken by M.E.A. candidates during those semesters in which they are assigned to design one or more elements in a production 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 TH&F 720 Introduction to Graduate Study in Theatre and Film (3). Major emphasis is placed upon the principles of research, bibliographical data, and research methods useful in theatre, film, and television. The course should be taken at the beginning of the graduate student’s program. LEC TH&F 725 Russian Theatre and Drama from Stanislavski and Chekhov to the Present (3). A study of the development of Russian theatre and dramatic literature from 1888 to the present. Lectures and readings in English. (Same as SLAV 562.) LEC TH&F 800 Master’s Projects (3-6). Advanced creative projects which may be elected by master’s degree candidates in lieu of thesis. RSH TH&F 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. LEC TH&F 810 Advanced Studies in Japanese Acting (3). A continuation of TH&F 710. In addition to continued study and practice of classical Japanese acting styles, the application of Japanese classical theatre practice to the production of Western plays will be explored. Prerequisite: TH&F 710, LEC TH&F 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: TH&F 715, FLB TH&F 817 Theory of Acting and Directing (3). Readings, lectures, discussions and papers on acting and directing theory; is concerned with the divergence between presentation and representational acting methods and the emergence of directing art. Prerequisite: TH&F 609 or TH&F 715. LEC TH&F 818 Scenography V (3). Individual problems in scenography. Advanced projects tailored to the needs of the individual student. Prerequisite: TH&F 619. LEC TH&F 819 Advanced M.F.A. Production Seminar (3). Continuation of TH&F 719. May be repeated for a maximum of six hours credit. Prerequisite: Six hours of TH&F 719 and consent of instructor. LEC TH&F 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 identify different periods and movements within national and international contexts. The analysis of representative works and authors will be grounded within appropriate theoretical frameworks. LEC TH&F 827 Japanese Theatre and Film (3). Study of traditional and modern Japanese theatre and film focusing on genres, history and production conventions. LEC TH&F 828 Seminar in American Theatre and Drama to 1895 (3). Intensive investigation of selected topics. Individual study emphasized. LEC TH&F 829 Seminar in American Theatre and Drama from 1895 (3). Intensive investigation of selected topics. Individual study emphasized. LEC TH&F 837 Problems in Screen Writing: _____ (1-3). The principles of screen writing are developed through scene writing and analysis culminating in the writing and structure of a full-length, three-act screenplay. May be repeated for credit as topic changes. In addition to the class sessions taught in tandem with either TH&F 475, 476, and 477 the separate consultations and specific research assignments for graduate students in TH&F 873 are required. LEC TH&F 875 Problems in Video Production (Special Topics): _____ (3). May be repeated for credit as topic changes. Prerequisite: Consent of Instructor. LEC TH&F 876 Problems in Film Production (Special Topics): _____ (3). May be repeated for credit as topic changes. Prerequisite: Consent of instructor. LEC TH&F 880 Development of American Popular Culture of the _____ (3). Intensive interdisciplinary examination of popular culture forms and their relationships with the social, political, and economic dynamics of America in a specific decade, with emphasis on film, broadcast theatre, music literature (including magazines and newspapers), and the graphic arts. Decade to be studied changes as resources and needs develop. LEC TH&F 881 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 Expressive Realism. LEC TH&F 882 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 TH&F 883 Development of the International Sound Film (3). Intensive study of the artistic, economic, and sociological development of the international sound film with emphasis on films of England, France, Italy, Germany, Sweden, and Eastern Europe. LEC TH&F 884 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 TH&F 584, a separate discussion section and specific research assignments for graduate students enrolled in TH&F 884 are also required. LEC TH&F 885 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 indigenous and Chicano/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, etc.) LEC TH&F 887 Film and the Public (3). A study of the actual and implied responsibilities of film and video to the public, and in regulations, self-regulatory codes, and the critical literature of the field. Prerequisite: Consent of instructor. LEC TH&F 888 Special Problems in Film History and Criticism (1-4). RSH TH&F 894 Seminar for Film Interns (1-3). To be taken concurrently with graduate internship 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

TH&F 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 the thesis is to the traditional program.) RSH

TH&F 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

TH&F 898 Investigation and Conference (for Master’s students) (1-8). Directed research and experimentation in theatre and/or film/video. Limited to eight hours credit toward the Master’s degree. RSH

TH&F 899 Master’s Thesis (1-9). RSH

TH&F 901 Theatre Seminar in: (3). A graduate seminar devoted to selected historical, theoretical, or critical issues in theatre.
Prerequisite: Consent of instructor. LEC

TH&F 902 Film Seminar in: (3). A graduate seminar devoted to selected historical, theoretical, or critical issues.
Prerequisite: Consent of instructor. LEC

TH&F 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: TH&F 525 and TH&F 526 or comparable courses. LEC

TH&F 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: TH&F 525 and TH&F 526, or comparable courses, and preferably TH&F 915. LEC

TH&F 917 Dramatic Theory I (3). A survey of dramatic theory from Plato to Lessing. LEC

TH&F 918 Dramatic Theory II (3). A survey of dramatic theory from Lessing to Langer. LEC

TH&F 919 Dramatic Theory Seminar (3). Study in depth of selected theorists. Offered as determined by faculty availability and student interest. LEC

TH&F 920 Practicum in Criticism (3). Contemporary approaches to theatre and drama criticism, including applications to film. Emphasis on actual practice, using a variety of critical methods. FLD

TH&F 922 History of the Theatrical Event (3). Detailed examination of selected theatrical pieces with emphasis placed upon the relationship of nontextual elements to the event. Prerequisite: TH&F 525 and TH&F 526 or equivalent. LEC

TH&F 998 Investigation and Conference (for Doctoral students) (1-8). Directed research and experimentation in theatre and/or film. Limited to eight hours credit towards the doctoral degree. RSH

TH&F 999 Doctoral Dissertation (1-12). RSH

The following course is cross-referenced as available to or recommended for students in Theatre and Film:

WS 513 Modern American Women in Film and Literature

Turkish
See Slavic Languages and Literatures.

Ukrainian
See Slavic Languages and Literatures.

Women’s Studies

Chair: Ann E. Cudd
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7574, (785) 864-2311
www.ku.edu/~wsku

Professors: Cudd, Muehlenhard, Schofield

Associate Professor: Ajayi-Soyinka

Assistant Professors: Bayard de Volo, Jenkins, Vicente


The women’s studies program supports interdisciplinary research on women and gender and administers an interdisciplinary program leading to a Graduate Certificate in Women’s 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 the Graduate School.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Graduate Certificate Requirements

The graduate certificate requires completion of 12 credit hours of graduate work, including WS 801 Women and Gender Studies: Theory and Methods; WS 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).

WS 801 Women and Gender Studies: Theory and Methods 3

WS 898 Research Colloquium: women and gender studies 3

Recommended Graduate Electives (6 credit hours).

WS 510/AMS 510/HIST 530 History of American Women: Colonial Times to 1870 3

WS 511/AMS 511/HIST 531 History of American Women: 1870 to Present 3

WS 520 Women and Violence 3

WS 549/HIST 649 History of Feminist Theory 3

WS 560/AAS 560 Race, Gender and Post-Colonial Discourses 3

WS 582/FOLS 582 Women and Politics 3

WS 580 Feminism and Anthropology 3

WS 600/POLS 600 Contemporary Feminist Political Theory 3

WS 651/FOLS 651 Women and Politics in Latin America 3

WS 660 Human Reproduction: Culture, Power, and Politics 3

WS 665 Women, Health, and Healing in Latin America 3

WS 696 Studies in: 3

WS 701 Seminar in: 3

WS 797 Directed Readings 3

AAAS 520 African Studies in Women and Islam, Muslim Women’s Auto-biography, African Women Writers 3

AMS 512/HIST 532 History of Women and Work in Comparative Perspective 3

COMS 559/COMS 930 Seminar in: Women as Political Communicators 3

EALC 575 Love, Sexuality, and Gender in Japanese Literature 3

ENGL 572 Women and Literature: Women’s Autobiography and Bildungsroman 3

ENGL 709 Critical Theory: Problems and Principles: Feminist Theory/Women’s Texts 3

ENGL 774 Topics in Literatures of Africa and the African Diaspora: Representations of Motherhood 3

ENGL 970 Seminar in American Literature: Edith Wharton and Willa Cather 3

HIST 933 The History of Women and the Family in Europe, from 1500 to the Present 3

HIST 986 Colloquium in United States Women’s History 3

HIST 993 Seminar in United States Women’s History 3

HPAM 620 Women and Health Care 3

PHIL 671 Feminist Theories in Ethics 3

PSYC 993 Seminar: Intergroup Relations 3

REL 672 Mother as Religious Metaphor 3

REL 677 Women in Christianity 3

REL 875 Topics in Religion and Society: Women and Religion 3

SOC 601 Introduction to Feminist Social Theory 3

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
SOC 617 Women and Health Care
SOC 623 Women and Work
SOC 722 Sociology of Gender
SOC 780 Advanced Topics in Sociology: Women of the Third World
SOC 808 Feminist Theories
SW 874 Social Work Practice with Women
TH&F 702 Graduate Seminar in: Representation of Race, Class, and Gender in Visual Culture

Women’s Studies Courses

WS 510 History of American Women: Colonial Times to 1870 (3).
WS 511 History of American Women: 1870 to Present (3).
WS 512 History of Women and Work in Comparative Perspective (3).
WS 513 Modern American Women in Film and Literature (3).
WS 520 Women and Violence (3).
WS 549 History of Feminist Theory (3).
WS 560 Race, Gender, and Post-Colonial Discourses (3).
WS 562 Women and Politics (3).
WS 580 Feminism and Anthropology (3).
WS 600 Contemporary Feminist Political Theory (3).
WS 601 Seminar in Women’s Studies (3).
WS 646 Witches in European History and Historiography (3).
WS 650 Service Learning in Women’s Studies (3).
WS 651 Women and Politics in Latin America (3).
WS 665 Women, Health, and Healing in Latin America (3).
WS 696 Studies in: _____ (3).
WS 701 Seminar in: _____ (3). A research seminar in women’s studies. Instructor and topic will vary. LEC
WS 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 contemporary theories, research, and pedagogies informing the anthropology of gender. Class participants will explore how these materials intersect within their current thesis or research projects and develop syllabi specific to their subdiscipline. (Same as ANTH 789.) Prerequisite: Permission of instructor. LEC
WS 797 Directed Readings (1-3). Directed reading in an area of women’s studies in which there is no appropriate course in the offerings of the Women’s Studies Program, but in which there is a member of the cooperating graduate faculty competent and willing to direct the program of study. RSH
WS 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
WS 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
WS 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: WS 801 and at least 3 hours of other graduate work in the Women’s Studies graduate certificate program, or by special permission. LEC

The following courses are cross-referenced as available to or recommended for students in Women’s Studies:

COMS 552 The Rhetoric of Women’s Rights
ENGL 572 Women and Literature:
ENGL 573 U.S. Latina/o Literature:
HIST 510 Topics in: _____
HIST 533 The History of Women and the Family in Europe, from 1500 to the Present
HIST 606 Childhood and Youth in America
HIST 607 The Family in History: Comparative Perspectives
HP&M 620 Women and Health Care
PHIL 671 Feminist Theories in Ethics
PSYC 502 Human Sexuality
REL 672 Mother as Religious Metaphor
REL 677 Women in Christianity
SOC 601 Introduction to Feminist Social Theory
SOC 617 Women and Health Care
SOC 623 Women and Work
### School of Medicine

Barbara Atkinson, Executive Dean  
Mail Stop 1049, KU Medical Center  
3901 Rainbow Blvd., Kansas City, KS 66160  
(913) 588-5200

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interdisciplinary Graduate Program in Biomedical Sciences</td>
<td>317</td>
</tr>
<tr>
<td>Combined Medical &amp; Graduate School Degrees</td>
<td>317</td>
</tr>
<tr>
<td>Anatomy &amp; Cell Biology</td>
<td>317</td>
</tr>
<tr>
<td>Biochemistry &amp; Molecular Biology</td>
<td>319</td>
</tr>
<tr>
<td>Health Policy &amp; Management</td>
<td>321</td>
</tr>
<tr>
<td>Microbiology, Molecular Genetics, &amp; Immunology</td>
<td>324</td>
</tr>
<tr>
<td>Molecular &amp; Integrative Physiology</td>
<td>325</td>
</tr>
<tr>
<td>Neurosciences</td>
<td>327</td>
</tr>
<tr>
<td>Pathology &amp; Laboratory Medicine</td>
<td>327</td>
</tr>
<tr>
<td>Pharmacology, Toxicology, &amp; Therapeutics</td>
<td>328</td>
</tr>
<tr>
<td>Preventive Medicine &amp; Public Health</td>
<td>330</td>
</tr>
<tr>
<td>Distance Education</td>
<td>331</td>
</tr>
</tbody>
</table>

**Interdisciplinary Graduate Program in Biomedical Sciences**  

**Combined Medical & Graduate School Degrees**

**Anatomy & Cell Biology**

**Biochemistry & Molecular Biology**

**Health Policy & Management**

**Microbiology, Molecular Genetics, & Immunology**

**Molecular & Integrative Physiology**

**Neurosciences**

**Pathology & Laboratory Medicine**

**Pharmacology, Toxicology, & Therapeutics**

**Preventive Medicine & Public Health**

**Distance Education**
Academic programs at KU Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. Medical Center Graduate programs are components of KU’s Graduate School. The Office of the Dean of Graduate Studies at the Medical Center handles matters related to the graduate programs in Allied Health, Medicine, and Nursing.

The graduate programs below are available to all qualified students with appropriate baccalaureate degrees. The master’s and Ph.D. degrees also may be obtained in special studies in such interdisciplinary areas as immunology, immunohematology, toxicology, medical physics, endocrinology, molecular genetics, and clinical biochemistry.

Interdisciplinary Graduate Program in Biomedical Sciences

director, Interdisciplinary Graduate Program in Biomedical Sciences, 2035 Lied BRF Building
Mail Stop 3025, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-2719, fax: (913) 588-2711
www.kumc.edu/igpbs

Biomedicine and biotechnologies have been identified by Presidential and Congressional commissions as among the leading growth sectors of the American and world economies. Research at KUMC encompasses a broad spectrum, including investigations of the underlying mechanisms of protein structure and function; fundamental research pharmacology and toxicology; viral, microbial, molecular, cellular, developmental, reproductive, neuronal, immunological, renal, and general physiological biology; and clinically related studies focusing on a broad range of human diseases such as cancer and AIDS.

At KUMC, students enter an Interdisciplinary Graduate Program in Biomedical Sciences, which allows them time to receive an education in the most current areas of the biomedical sciences before they select laboratories for their graduate research programs. During the first year of the IGPBS, students take a state-of-the-art, highly integrated core curriculum that involves faculty members from all the basic science departments and some clinical departments.

In addition to fundamental principles essential for understanding the biomedical sciences, students in the first year receive an introduction to the practical aspects of research such as the use of biographics (organization and presentation of research data) and bioethics (issues such as authorship, appropriate use of animals in research, and procedures for human studies research). They also acquire first-hand experience in research methods through research laboratory rotations.

During the first semester, students see presentations from faculty members about research programs, then begin laboratory rotations with KUMC research faculty members. Research rotations also occur in the second semester. This gives students time to evaluate KUMC’s research programs before selecting the best program for them. Once students make this choice, they enter one of the seven degree-granting departments or programs at KUMC.

The IGPBS is flexible and totally student oriented. It provides the most advanced laboratory-based biomedical education available in the United States today. Students emerge from this program as highly competitive biomedical scientists.

Combined Medical and Graduate School Degrees

See the General Information chapter of this catalog.

Anatomy and Cell Biology

Chair: Dale R. Abrahamson
Graduate Adviser: Michael J. Werle
2008 Wahl Hall East, Mail Stop 3038
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-7000
www.kumc.edu/research/medicine/anatomy

Professors: Abrahamson, Bast, Berman, Durham, Hung, Hunt, Kinsey, Klein, Little, MacGregor, Sarras, Stephens

Professors Emeriti: Chapman, Mohn, Nelson

Associate Professors: De Lisle, Enders, Stehno-Bittel, Werle, Wright

Assistant Professor: Vanden Heuvel

The graduate programs are cell biology, developmental 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

Submit the following materials to the director of the Interdisciplinary Graduate Program in Biomedical Sciences:

- Photo, page 316: Students in pharmacology, toxicology, and therapeutics gain the broad background needed in pharmacological sciences.
The Medical Center campus in Kansas City, is the home of the University of Kansas School of Medicine.

KUMC's Interdisciplinary Graduate Program in Biomedical Sciences offers a state-of-the-art, highly integrated core curriculum that involves faculty members from all the basic science departments and some clinical departments.

1. Application for admission, domestic or foreign.
2. A letter discussing the applicant's academic objectives, general or specific research interests, and professional plans.
3. Two official transcripts of the applicant's academic record from each undergraduate or graduate institution attended.
4. Three letters of recommendation.
5. The applicant's scores for the aptitude and advanced parts of the Graduate Record Examination. (An applicant from a foreign country where this examination is not administered must submit a letter of verification about this situation to the department.) Medical College Admission Test scores may be considered for M.D./Ph.D. applicants and in unusual circumstances for applicants to the Ph.D. program.
6. Foreign applicants must submit their scores on the Test of English as a Foreign Language as well as Test of Spoken English scores.

Courses with laboratories in general biology, inorganic chemistry, organic chemistry, calculus, and physics should be completed before starting graduate work.

Requests for additional information about the graduate program, financial assistance, research interests of the departmental faculty, and requests for application forms should be directed to the Graduate Adviser, Department of Anatomy and Cell Biology.

Further information and applications are available online at www.kumc.edu/igpbs.

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 subgrouping 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 Modules 1 through 5 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 Graduate School requires that the student 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. (See Doctor of Philosophy, Research Skills in the General Information chapter of this catalog.)

Teaching Expertise. Each student must gain teaching experience by assisting in the laboratory sections of courses taught to medical students.

Dissertation. The student must complete original research, write a dissertation, and satisfactorily defend it in a final public seminar and oral examination. One or more parts of the dissertation must be suitable for publication in appropriate peer-reviewed scientific journals.

Anatomy Courses

ANAT 821 Human Anatomy and Embryology I (4). Study of the macroscopic structures of the human body. (Same as ATMY 821.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC

ANAT 822 Human Anatomy and Embryology II (5). Study of the macroscopic structures of the human body. (Same as ATMY 822.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students) LEC

ANAT 831 Cell and Tissue Biology (3). Lectures and laboratories devoted to the study of microscopic anatomy at the cellular, tissue, and subcellular levels. Lectures emphasize modern cell biological concepts and the correlation of structure with cell, tissue, and organ function. Laboratories teach the identification of cells, tissues, and organs and relate this information to functional concepts presented in lecture. (Same as ATMY 831.) Prerequisite: Consent of course coordinator (course intended for M.D./Ph.D. students). LEC

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 833 Cell and Tissue Biology II (3). Lectures and laboratories devoted to the study of microscopic anatomy at the cellular, tissue, and subcellular levels. Lectures emphasize modern cell biological concepts and the correlation of structure with cell, tissue, and organ function. Laboratories teach the identification of cells, tissues, and organs and relate this information to functional concepts presented in lecture. Prerequisite: Consent of course coordinator (course intended for M.D./Ph.D. students). LEC

ANAT 840 Neuroscience (5). This course integrates human neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, and basic neurology. Instruction formats include lectures, conferences, laboratories, and demonstrations. (Same as PHSL 840 and NEUS 840.) Prerequisite: A grade level physiology course or concurrent enrollment in PHSL 801, PHSL 802, and consent of instructor. LEC

ANAT 845 Graduate Histology (2). This course will bridge student knowledge of systems/organs with cellular histology and is designed as an accelerated introduction to histological techniques, microscope/ opticals, and histology. 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 and PHSL 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. Prerequisite: Advanced Neuroscience (ANAT 846; NURO 846; PHSL 846). Prerequisite: Consent of instructor. LEC

ANAT 848 Molecular Mechanisms of Neurological Disorders (2). 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 lat
eral 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). Prerequisites: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

ANAT 880 Seminar (1). Research-oriented presentations in a seminar format by students, faculty, and guests. LEC

ANAT 885 Advanced Topics: _____ (1-10). Independent laboratory investigation approved by and under the supervision of the student’s advisor, and in partial fulfillment of the requirements for the M.A. degree. Prerequisite: Consent of advisor. RSH

ANAT 890 Techniques in Anatomy and Cell Biology (1-3). Advanced study allowing a student to pursue a particular research or educational skill through directed laboratory work. Prerequisite: Consent of instructor. LEC

ANAT 895 Seminar (1). Research-oriented presentations in a seminar format by students, faculty, and guests. LEC

ANAT 898 Module 5 of the IGPBS: Molecular and Physiological Basis of Disease (3). This is module 5 of the first year curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover the basic principles and advanced aspects of prokaryotic and eukaryotic cell biology. It will cover such topics as: structure/function relationships of membranes and organelles, ECM structure, and integrated aspects of protein processing and sorting, endocytosis. Early aspects of development such as the relationship of gene expression to embryonic pattern formation will also be covered. This course is co-listed as PSHL 895. LEC

ANAT 899 Doctoral Research (1-12). Original and independent laboratory investigation, approved by and conducted under the supervision of the student’s advisor and advisory committee, in partial fulfillment of the requirements for the Ph.D. degree. Prerequisite: Consent of advisor. LEC

ANAT 970 Techniques in Anatomy and Cell Biology (1-3). Advanced study allowing a student to pursue a particular research or educational skill through directed laboratory work. Prerequisite: Consent of instructor. LEC

ANAT 980 Seminar (1). Research-oriented presentations in a seminar format by students, faculty, and guests. LEC

ANAT 990 Analysis of Scientific Papers (1). Research articles are analyzed by the student with the guidance of an instructor in terms of quality of scientific content and mechanics of the presentation. One or more articles are discussed in each tutorial session. The research topics and the instructor are chosen in accordance with the research interest of the student. LAB
The Department of Health Policy and Management offers the Master of Health Services Administration degree.

The M.D./M.H.S.A. program is under review. It is expected to be available in academic year 2003-04. Contact the Department of Health Policy and Management for information.

The Department of Health Policy and Management offers the Master of Health Services Administration degree.

The M.D./M.H.S.A. program is under review. It is expected to be available in academic year 2003-04. Contact the Department of Health Policy and Management for information.

Biochemistry & Molecular Biology

The Department of Health Policy and Management offers the Master of Health Services Administration degree.

The M.D./M.H.S.A. program is under review. It is expected to be available in academic year 2003-04. Contact the Department of Health Policy and Management for information.
Health Policy and Management

Chair: Cynthia Carter Haddock, chaddock@kumc.edu
4040 Varnes, Mail Stop 3044, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-2795, www.kumc.edu/som/hpm
Graduate Adviser: Jane Faubion, jfaubion@kumc.edu,
4040 Varnes, (913) 588-2908
Professors: Haddock, Zimmerman
Associate Professors: Fox, Lee
Assistant Professors: Magnus, Paul
The Department of Health Policy and Management offers the Master of Health Services Administration degree.

Admission
Admission is based on the applicant’s undergraduate and/or graduate record, Graduate Record Examination or Graduate Management Admission Test scores, and references. Completion of a bachelor’s degree is required. Admission is competitive and limited. Each applicant must pay a processing fee of $35.

Academic prerequisites for admission are (1) a completed application form from the Graduate School, (2) a brief statement of goals, (3) three letters of recommendation, (4) completion of the GRE or GMAT, (5) two copies of official transcripts, and (6) references. An interview with a member of the department faculty may be required. If travel to the area is impossible, a telephone interview may be substituted. Full-time students typically begin in fall semester. Part-time students may begin any semester.

Early application is encouraged. Deadlines for admission are July 15 for fall, December 1 for spring, and May 1 for summer.

Certificate in Outcomes Management and Research
The department offers a certificate in Outcomes Management and Research. The program prepares professionals to analyze the effects of health care interventions. They learn to develop programs that improve outcomes in clinical practice and to assess the impact of health care interventions on organizations, health and public policy, and the overall economy. Contact the department to determine eligibility for the certificate.

M.H.S.A. Degree Requirements
All candidates must complete, at a satisfactory level, 55 credit hours of courses in five general areas: health services, health management, business management sciences, professional development, and ethics. For full-time students, the course work includes an internship in the summer between the first and second year of study. Students with substantial experience in health services administration may elect either to serve an internship or complete a research project. Full-time students are encouraged to seek a residency/fellowship after graduation.

Courses are taught late afternoons and evenings. Part-time students should not expect to register for more than 6 hours in any one semester. Students begin work with introductory courses (e.g., Health Systems), with more advanced course work to be completed later (e.g., Health Policy and Administration). The curriculum requires that many courses be taken in sequence.

Joint Degree Programs
The Juris Doctor/Master of Health Services Administration program combines into four years of study the three-year J.D. program and the two-year M.H.S.A. program. This program offers a thorough academic grounding in both disciplines to students who plan to practice law or to enter health care management. Interested students should contact both programs for admission information.

The Master of Science in Nursing and M.H.S.A. programs are offered to health services administration and nursing leadership majors. By combining some course work, the two degrees may be completed in 68 credit hours, compared to 99 credit hours if the degrees were pursued independently. Application to both programs is required.

The Master of Business Administration and M.H.S.A. programs are offered to health services administration and business administration majors. By combining some course work, the two degrees may be completed in 66 credit hours. Application to both programs is required.

The M.D./M.H.S.A. program is under review. It is expected to be available in academic year 2003-04. It will combine into five years of study the four-year M.D. program and the two-year M.H.S.A. program.

Health Policy and Management Courses
HP&M 600 Directed Readings (1-3).
HP&M 601 Survey of Health Systems (3).
HP&M 620 Women and Health Care (3).
HP&M 650 Health Care Economics (3).
HP&M 800 Health Services Colloquium (1-3). This course will be an introduction to the health services administration profession through regular seminars held over the course of the student’s two-year tenure at the University of Kansas and involve meeting with established professionals, members of the department faculty, as well as faculty from programs across the country. The seminar will be on a dialogue basis—emphasizing the information and values that make successful health services administrators. The course is also designed as a practicum in health services management with on-site visits and seminars in a variety of health services delivery settings including medical schools, acute care facilities, long-term facilities, pre-paid group practice, fee-for-service group practice and a number of other settings. Prerequisite: Approval of chairperson of department. FLD
HP&M 810 The Health Care System (4). This course introduces students to the health care system of the United States. The course stresses the system’s historical development, distinguishing features, financing, management, resources, and politics. Requirements include position papers, class discussions, examinations, and site visits to health care facilities. LEC
HP&M 814 Health Care Economics (3). This course introduces students to health care economics. By the end of the course a student should understand the core concepts of managerial economics; the relevance of demand for health care organizations; the structure of insurance and its impact; the determinants of costs in health care organizations; the factors underlying resource allocation in health care organizations; the implications of differences in market structure; the basics of decision making in the face of uncertainty; and the basics of the evaluation of outcomes. Problems, presentations, lectures, discussion, and examinations. LEC
HP&M 815 Health Services Financial Accounting (3). This course is an introduction to financial accounting with emphasis on generally accepted accounting principles applied to organizations providing health services. Emphasis is on understanding the accumulation and interpretation of information for decisions by internal and external users in a variety of health service settings. Consideration is given to financial information systems of voluntary community settings as well as multiple facility organizations. LEC
HP&M 817 Health Care Statistics (3). Elementary statistical techniques to include descriptive statistics, probability, sampling, and statistical inference of means and proportions; advanced statistical techniques include multivariate analysis of qualitative and quantitative variables using multiple linear and logistic regression. LEC
HP&M 821 Health Services Research: Epidemiology, Evaluation, and Survey Methods (3). Students learn the logic, assumptions, de-
The M.H.S.A. program prepares administrators for management positions in hospitals, clinics, public health, and long-term health care facilities.

Dykes Library for Health Sciences provides a comprehensive health sciences collection of more than 170,000 books, journals, and microforms with online computer catalog systems, http://library.kumc.edu.

Health Policy & Management

signs, 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 a working knowledge of the research process itself. Emphasis is placed on examining basic health services issues such as measuring quality of care, understanding the role of social factors in the etiology of disease, determining the health status and health needs of populations, and incorporating health services research into organizational policy and decision-making. (Same as SOC 814.) Prerequisite: HP&M 810 and HP&M 812, or consent of instructor. LEC

HP&M 824 Health Finance (3). A survey of the financial management of health care organizations. Topics may include market structure and reimbursement, financial accounting, financial ratio analysis, capital and money markets, working capital management, capital budgeting, and analysis of mergers and acquisitions. Prerequisite: HP&M 810, HP&M 812, HP&M 814, or permission of instructor. LEC

HP&M 825 Health Services Managerial Accounting (3). The focus of the course is on understanding and interpreting information necessary for managers to develop plans and budgets, establish controls, and evaluate performance of providers of health services. Emphasis is on product pricing and costing issues. Consideration is given to the realities and trends found in health services including the wide range of organizational settings and the impact of third party payment methods. Prerequisite: HP&M 815. LEC

HP&M 826 Management Information Systems (3). A broad introduction to information systems for management decision-making. Specific topics include basic concepts of MIS, need for MIS in organizations, role of computers in MIS, applications of MIS, decision-making, decision support systems, and data communication. LEC

HP&M 828 Human Resources Management (3). This course will cover managerial responsibilities relating to human resources. Constraints on managerial discretion (including economic, and institutional environment) are reviewed. The major focus of the course is on such concerns of management as compensation, staffing, and labor management relations. Students will be introduced to current human resource issues. LEC

HP&M 830 Health Services Management (3). This course introduces the prospective health services administrator to the concepts of organizational theory and the management of organizations. General topics include the role of management, planning and control, organizational design, and managing organizational change. Managerial problems and issues specific to health services organizations will be presented and discussed. The course is oriented toward health services organizations and the general principles of management that apply in the health services industry. Prerequisite: HP&M 810. LEC

HP&M 833 Health Law (3). Topics might include terminology, anti-trusts, licensure, medical malpractice, insurance, delegation and liability, negligence, patient rights (especially privacy); legal standards for care legal process and trial procedures; governmental regulation; contracts; informed consent; and medical records. Prerequisite: HP&M 810. LEC

HP&M 835 Health and Social Behavior (3). This course provides students with an analytic understanding of the organizational, professional, and interpersonal behavior that characterizes contemporary health care. Emphasis is on the integration and application of conceptual frameworks theories, and research findings bearing on internal, organizational, and interpersonal issues as they relate to the planning and management of outcomes-based quality improvement programs. Prerequisite: HP&M 810 or HP&M 814. LEC

HP&M 836 Topics in Health Services Administration (3). Study of selected topics in health services administration. IND

HP&M 837 Health Care Policy and Administration (3). A seminar designed to explore the development of public health policy in the United States. Participants to (1) the development of public institutions and policy goals; (2) current policy problems such as expenditure-cost controls, prospective reimbursement, utilization review, assessment, and public and private investment planning; and (3) administrative problems and constraints in the current health care systems. Prerequisite: PUAD 827.) Prerequisite: HP&M 810, HP&M 821, HP&M 824, or consent of instructor. LEC

HP&M 838 Rural Health Care (3). Examination of the demographic and economic factors and their effects on the demand for and delivery of health care services in rural areas. Includes analysis of social cultural differences and similarities between rural and urban populations, challenges to sustaining access to basic health care services, policy initiatives affecting access and availability of care in rural America, and identification of innovative approaches to delivering services to rural populations. LEC

HP&M 839 Medicare and Medicaid (3). Provides students with an in-depth understanding of the three publicly financed health programs that impact virtually all aspects of the American health care system - Medicare, Medicaid and Children's Health Insurance Programs (CHIP). Explores history and evolution of each program, plus specific operational issues such as eligibility, financing, management reporting, state and federal coordination, and the impacts of recent legislation. Prerequisite: Permission of the instructor. LEC

HP&M 840 Strategic Management of Health Services (3). This course is a capstone course in the management of health care institutions. The student will learn concepts and techniques of strategic analysis, planning, marketing, and decision-making. The primary course objective is to integrate the concepts and techniques into a strategic management framework appropriate for current health care environments. The last part of the course will be devoted to participation in a computer-simulated strategic planning game, and development of a strategic plan for a health care organization. Prerequisite: HP&M 824, HP&M 830, HP&M 835, BUS 810, or permission of instructor. LEC

HP&M 845 Ethics (3). Examination of the value basis for allocating scarce health resources. Includes critically examining ethical theories, personal and professional values and cultural norms. Prerequisite: HP&M 830, 835 and 837 or consent of instructor. LEC

HP&M 850 Women and Health Care (3). A gender analysis of the organization of health care in the United States, using sociological and sociological perspectives. Considers the health status and health care problems of women in non-traditional and non-traditional health care; the roles of both informal and professional health care providers; the public economy of health care systems, and the relationship between gender and health care. Prerequisites: HP&M 801, or HP&M 810, or permission of instructor. LEC

HP&M 853 Managed Care (3). Focus on managed care concepts and principles from the perspectives of the payer (HMO, PPO, etc.), the provider, the hospital, the employer and the patient. In-depth exploration of managed care product offerings, pricing techniques, understanding implications, legal requirements and financing models leading to the development of a strategic managed care plan for an organization. Will review the art and techniques of negotiation and participation in a managed care negotiation exercise. Prerequisite: HP&M 810 or permission of instructor. LEC

HP&M 855 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 each other and to the health care system of the United States. Patterns in control and financing will be studied in relation to issues of cost, quality access, and in relation to cultural values. Special attention will be placed on comparative analysis of reform efforts. Prerequisite: HP&M 810 or permission of instructor. LEC

HP&M 857 Evaluating Outcomes of Healthcare (3). This course will trace the development of the outcomes research movement and provide examples of methodologies, assessment instruments and issues that guide outcomes research. It will also review methods for linking research findings with clinical practice (i.e., clinical practice guidelines). Obstacles to acceptance of practice guidelines will 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 859 Provider Workforce and Staff Development (1). This course provides an overview of the current provider workforce, including physicians and ‘mid-level’ practitioners. Information is provided on trends in graduate medical education provider work force policy, and medical staff development planning. The primary focus of the course is on the management of provider recruitment and retention. Information is presented on recruitment planning, compensation, and the actual process of recruiting and retaining medical providers. Prerequisite: HP&M 810 or permission of instructor. LEC

HP&M 861 Public Health Administration (3). This course provides an in-depth understanding of the provision of public health; assessment, policy development, and assurance. It uses both theoretical and practical material to develop basic administrative competencies necessary for the practice of public health. Prerequisite is placed on case studies which examine how public agencies use public and private resources most efficiently, effectively, and equitably in order to maintain or improve the health of populations. (Same as PRM 827.) Prerequisite: HP&M 810 or permission of instructor. LEC

HP&M 863 Quality Management (3). This course integrates outcomes management and research. Through projects, site visits, readings, and class discussions, students develop an informed basis for leading quality improvement efforts in various health care settings. Upon completion of the course, the student will be able to contribute to the planning and management of outcomes-based quality improvement programs; describe central issues in measuring functional status, quality of life, adherence to guidelines, and costs; articulate the potential rewards and costs of quality management efforts;
apply scientific evidence on health care outcomes to quality management; and use techniques that are common in quality management. (Same as NRSG 880.) Prerequisite: HP&M 821 or NRSG 754 or equivalent course; or consent of the instructor. LEC

HP&M 870 Measurement in the Evaluation of Health Services (3). This course will cover the nature and problems of measuring health status and health-related factors in human populations. Specific types of measures and various strategies will be compared at the nominal, ordinal, and interval-ratio levels of measurement. Students will be exposed to a range of measures from single response items to frequency measures, to the construction of multiple-item indexes and scales. Techniques for establishing comparability. Special attention will be placed on understanding the sources of measurement error and how to avoid the overlap and validity of measures. Exposure to the process of translating medical practice guidelines, quality indicators, or other medical outcome objectives into data collection instruments such as questionnaires or abstraction schedules for use with medical records. Students will learn how issues of measurement interface with other methodological issues such as selection of study populations and choice of statistical analytic techniques. (Same as NRSG 887.) Prerequisite: An introductory course in descriptive and inferential statistics course work in epidemiology and health services research methods. LEC

HP&M 871 Pharmacoepidemiology (3). This course provides students with an understanding of the conceptual and methodological approaches to the study of drug use and human diseases. Applications of different study designs and methods of analysis are introduced as ways to assess risk among selected populations receiving specific drug treatment. Students will gain experience in integrating and using data sets from which disease status can be inferred, and analyzing pharmaco-technical use as it relates to potential health outcomes. LEC

HP&M 872 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. LEC

HP&M 874 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 patient care and delivery 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

HP&M 876 Seminar in Outcomes Management and Research (1). Students admitted to the Certificate in Outcomes Management and Research program interact to build on the integrative content from the other outcomes management courses. During seminars the students discuss and analyze presentations and publications, reporting studies and projects undertaken to describe, evaluate, and improve clinical, financial, and quality-of-life outcomes of medical and health care interventions. Prerequisite: Admission to the Certificate in Outcomes Management and Research program or permission of instructor. LEC

HP&M 878 Grant Writing (3). The course is designed to take the principles and mechanics learned in introductory epidemiology and bio-statistics 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 NRSG 889.) Prerequisite: HP&M 821 and NRSG 886. LEC

HP&M 890 Internship (1-3). All students without substantial experience in health services administration are required to serve a three-month internship (usually between their first and second year in the program) in a hospital, long-term care facility, insurance facility, or government agency. Placement is the responsibility of the student, with assistance from the department. The internship will be monitored by a member of the faculty. Prerequisite: Approval of chairperson or department. FLD

HP&M 891 Research Practicum in Health Services Administration (3). A course to explore applied research topics associated with specific health services delivery of management problems. Prerequisite: HP&M 821 and HP&M 830. RSH

HP&M 893 Long-Term Care Practicum (3). A twelve-week practicum in an approved long-term care facility under the guidance of a registered preceptor and instructor. Completion of the practicum meets the 480-hour requirement by the Kansas Board of Adult Care Home Administrators. Placement is the responsibility of the student. Prerequisite: HP&M 880. Permission of instructor. FLD.

HP&M 890 Directed Readings (1-3). This course is designed to meet the needs of students who have a special interest that cannot be met by existing courses. IND

History and Philosophy of Medicine

No graduate program is offered in this area, but the following courses may be taken for graduate credit.

History and Philosophy of Medicine Courses

HP&M 802 Introduction to Clinical Medicine I (3). Includes Social Basis of Medical Practice (SBMP) and Clinical Skills. SBMP acquaints students with the historical development of American medicine, allowing them to recognize and examine in detail the social forces affecting medical practice today. Through lectures and small group discussion, students explore the impact of social influences in three areas: the production and modification of disease, the organization of medical care, the interpretation of illness. Course activities also promote the development of oral and written communication skills. CLINICAL SKILLS helps students acquire and use the knowledge, skills, and attitudes of a competent, caring clinician. Through lectures, demonstrations, tutorials, standardized patient encounters, and preceptor experiences, students learn and practice patient interview and physical examination. This module emphasizes the evaluation of the normal patient and the application of principles introduced in basic science courses (e.g., anatomy and physiology) to the physical exam. Students are evaluated through written examinations and other written assignments, small group presentations, preceptor activities, and standardized patient encounters. (Same as ICM 802.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC.

HP&M 850 Introduction to Clinical Medicine II (3). Includes Clinical Epidemiology and Prevention (CEP) and Physical Diagnosis. CEP provides an introduction to biostatistics and epidemiology, and illustrates their relevance to clinical practice, research, and public health policy. Students also examine the role of clinical preventive services, including counseling, immunization, and screening. PHYSICAL DIAGNOSIS builds on material covered in the Clinical Skills component of PRVM 801 and HP&M 892. The focus of this module is the evaluation of patients with common complaints and illnesses. Through lectures, demonstrations, tutorials, standardized patient encounters, and preceptor experiences, students develop skills in interpreting, physical examination, and the use and interpretation of laboratory tests. Case-based tutorials introduce students to the principles of differential diagnosis and evidence-based medicine. Students are evaluated through written examinations and other written assignments, small group presentations, preceptor activities, and standardized patient encounters. (Same as ICM 850.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC.

HP&M 851 Introduction to Clinical Medicine III (3). Medical Ethics, Behavioral Medicine, and Physical Diagnosis. MEDICAL ETHICS (The Patient-Doctor Relationship in the 21st Century) introduces students to the disciplines of medical ethics, law and medicine, and literature and medicine. Through lectures and small group discussion, students explore the ethical and legal aspects of the physician-patient relationship. Course activities also promote the development of oral and written communications skills. BEHAVIORAL MEDICINE introduces students to the biological and psychosocial basis of psychopathology and the assessment and management of disturbances of perception, cognition, mood, and behavior. Readings and lectures describe biopsychosocial risk factors associated with major psychiatric syndromes, cognitive disorders, personality disorders, sexual dysfunction, depression, anxiety, sleep disturbances, and substance use disorders. Demonstrations (videotape and live patient presentations) highlight diagnostic methods and clinical management techniques. PHYSICAL DIAGNOSIS builds on material covered in the Clinical Skills component of PRVM 801 and HP&M 892. The focus of this module is the evaluation of patients with common complaints and illnesses. Through lectures, demonstrations, tutorials, standardized patient encounters, and preceptor experiences, students develop skills in interviewing, physical examination, and the use and interpretation of laboratory tests. Students are evaluated through written examinations and other written assignments, small group presentations, preceptor activities, and standardized patient encounters. (Same as ICM 851.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC.

HP&M 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. Human research issues, including federal regulatory structure and informed consent. No prerequisites. LEC.
Microbiology, Molecular Genetics, and Immunology

Chair: Opendra Narayan
3025 Wahl Hall West, Mail Stop 3029
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-7010
www.kumc.edu/instruction/medicine/microbio

Graduate Adviser: Joe Lutkenhaus,
3016 Wahl Hall West, (913) 588-7054


Professor Emerita: Furtado

Graduate programs in microbiology and related areas are primarily for students who wish to obtain either the Ph.D. or combined M.D./Ph.D. degree. The M.A. degree may be granted in appropriate circumstances.

Admission
Admission is through the Interdisciplinary Program in Biomedical Sciences. In addition to Graduate School admission requirements, the program requires completion of calculus, inorganic chemistry including qualitative and quantitative analysis, two semesters of organic chemistry, two semesters of biology, and two semesters of physics. Applicants must take the general aptitude portion of the Graduate Record Examination and forward the results to the program. Three letters of recommendation also are required.

M.A. Degree Requirements
Course and Thesis Requirements. Students must accumulate 40 hours of graduate credit, including the following courses: MICR 808, MICR 820, MICR 830, MICR 835 and three elective graduate-level courses of at least 3 credit hours each. 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. Degrees
Candidates for the combined M.D./Ph.D. degree must meet all requirements for the Ph.D. degree.

Course Requirements. Students pursuing the Ph.D. degree must complete the first year of the IGPBS and two of the core courses offered by the department. These include MICR 808, MICR 820, and MICR 825. Students also must present literature seminars.

Foreign Language or Research Skills. Before taking the comprehensive examination for the doctorate, the student must satisfy the FLORS requirement of the Graduate School. This requirement can be satisfied by demonstrating foreign language competence or by completing a course dealing with research skills outside the primary area of 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. During the second year of study, 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 generally is expected that the research will be of sufficient quality to permit publication in reputable scientific journals.

Microbiology Courses
MICR 800 Microbial Physiology and Biochemistry (3). Prokaryotic systems mainly, but brief comparisons to eukaryotic systems will be made when appropriate. Subjects covered will include structure-function relationships, nutrition and growth, metabolic pathways, nucleic acid chemistry and genetic aspects, protein biosynthesis including genetic concepts, control mechanisms, and the effect of physical and chemical agents and antibiotics. Prerequisite: Permission of instructor. LEC

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 810 Bacterial Pathogens (3). Properties of bacteria that contribute to their pathogenicity in humans. This includes selected coverage of bacterial virulence factors such as capsules, adhesions, extracellular products and toxins as related to the establishment of colonization and the pathogenesis of infection. Prerequisite: MICR 808, MICR 808, and permission of instructor. LEC

MICR 815 Regulatory Systems of Eukaryotic Cells (3). Cellular regulation emphasizing comparative metabolism, energetics, and structural correlations in non-organismic models. Lectures and conferences. Prerequisite: Permission of course director. LEC

MICR 820 Microbial Genetics (3). Analysis of the structure and function of genes and their regulation. Subjects covered include mutation, gene regulation, bacterial genetic exchange, recombination, bacterial phage genetics, transposons, plasmids, and a discussion of recombinant DNA techniques. Prerequisite: Permission of instructor. LEC

MICR 825 Virology (3). Molecular biology of animal viruses. Aspects of various virus groups 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 laboratory modules 3 of the first year curriculum for the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced aspects of prokaryotic and eukaryotic molecular biology with topics such as DNA structure, transcriptional and translational mechanisms, and mechanisms of gene expression. This course is co-listed as BCHM 893. (Same as BCHM 893.) 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 893 Module 3 of the IGBP5: Molecular Biology (4). This is module 3 of the first year curriculum for the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced aspects of prokaryotic and eukaryotic molecular biology with topics such as DNA structure, transcriptional and translational mechanisms, and mechanisms of gene expression. This course is co-listed as BCHM 893. (Same as BCHM 893.) 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. Top-
ics to be covered include protein secretion, microbial development, cell-
lar responses to environmental stresses, DNA replication and segreg-
gation, peptidoglycan biosynthesis and cell division. Prerequisite: 
MCR 820 or MCR 800 or permission of instructor. LEC
MCR 908 Molecular and Cellular Immunology (3). Mechanisms of 
immune responses. Lectures and conferences will review cellular 
and biochemical mechanisms regulating functions of lymphocytes, 
macrophages, neutrophils, and other cell types. Particular emphasis 
will be placed on recent progress in understanding the roles of various 
cell surface molecules in cell specificity and activation, lymphokines 
and cytokines mediating cell communication, and genetic control of 
immune response. Prerequisite: MCR 808 or the equivalent, or per-
mission of the course instructor. LEC
MCR 910 Cytokine Biology and Molecular Biology (3). Topics in 
genetics with lectures and discussions about recent advances 
in molecular and cellular immunology. The topics include the following 
with emphasis on genetic aspects: Sporulation and differentiation, bacterial 
pathogenicity, recombination, cell growth and division, DNA replica-
tion and site-specific mutagenesis. Prerequisite: MCR 820 or permis-
sion of instructor. LEC
MCR 920 Advanced Microbial Molecular Genetics: Prokaryotes (3).
Topics in genetics with lectures and discussions covering advances in 
molecular genetics of microbial eukaryotes. Prerequisite: MCR 820 or permis-
sion of instructor. LEC
MCR 925 Advanced Virology (3). An advanced course dealing with a
detailed analysis of current concepts in cytokine research with emphasis on 
discussion of the contemporary scientific literature of the field. Topics 
shall include the following: cytokine biosynthesis, including descrip-
tion of the cellular biochemistry leading to the expression of cytokine 
and cytokine receptor genes, the nature of and signalling through cy-
tokine receptors; regulation of cytokine action, including inhibitors and 
receptor antagonist; the pathophysiology of cytokines in disease; and 
potential cytokine therapeutic approaches. Prerequisite: MCR 808 or 
equivalent or permission of the course instructor. LEC
MCR 930 Advanced Topics in Microbiology (1-8). An advanced 
approach to selected topics in any of the major disciplines in microbiol-
ogy: Readings and conferences, or advanced laboratory techniques. 
LEC
MCR 990 Research for Ph.D. in Microbiology (1-10). This course is 
restricted entirely to thesis research. RSH
MCR 999 Thesis for Ph.D. in Microbiology (1-10). Restricted to ac-
tual writing of dissertation. LEC

Molecular and Integrative Physiology
Chair: Paul D. Cheney, pcheney@kumc.edu
3011 Wahl Hall East, Mail Stop 3043
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-7400
www.kumc.edu/physiology
Graduate Adviser: Thomas Imig, timig@kumc.edu,
3003 Wahl Hall East, (913) 588-7025
Professors: Cheney, Gonzalez, Imig, Nudo, Smith,
Soares, Tarr, Terranova, Valenzeno, Voogt
Professors Emeriti: Greenwald, Johnson, Samson
Associate Professors: LeVine, Tash, Wolfe, Wood
Assistant Professors: Blanco, Godwin, Heckert,
Imagawa, Nothnick

Programs range from factors controlling gene expression 
to whole animal adaptations; the common thread is 
that all programs endeavor to understand biological func-
tion in health and disease. The program provides out-
standing didactic instruction and laboratory experiences 
that enable students to become effective teachers and in-
dependent investigators. The department participates in 
the IGPBS at KU Medical Center and provides research 
emphases in cardiovascular biology, cell and develop-
mental biology, molecular and cellular biophysics, cellu-
lar 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 M.D./Ph.D. degree. De-
gress are granted to persons who fulfill both departmen-
tal and Graduate School requirements.

Admission
The applicant must have a bachelor’s degree from an 
accredited college or university. Minimum course re-
quirements are two semesters of general chemistry, 
two semesters of organic chemistry or one semester 
each of organic and biochemistry, two semesters of bi-
ological sciences, one semester of calculus, and one sem-
ester of physics. Some course deficiencies may be 
rectified during the first year of graduate study. Gradu-
ate Record Examination Aptitude Test scores are re-
quired, although the results may be pending at the 
time of application. The applicant is encouraged to take 
the GRE Advanced Test corresponding to her or his 
major undergraduate course of study.

To ensure consideration for financial support, appli-
cations should be received by January 31.

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 Interdisci-
plinary Graduate Program in Biomedical Sciences. 
This consists of nine modules:
1. Thermodynamics, protein structure, analysis of 
reactions, and binding kinetics.
2. Cell metabolism.
5. Molecular and physiological basis of disease.
7. Laboratory rotations.
8. Introduction to faculty research.
9. Introduction to ethics.

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 re-
quired. 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 stu-
dent defends orally. The student, with the guidance of 
his or her dissertation adviser, conducts an original re-
search project. The outcomes of that research are as-
sembled as a written dissertation generally consisting of 
a compilation of scientific papers submitted by the 
student for publication. A more traditional thesis for-
mat also can be used. The student defends this re-
search in a seminar open to all interested parties.
Molecular & Integrative Physiology

- **Physiology Courses**

  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 801 Medical Physiology (4). PHSL 801 is the first half of a two-semester course providing a systematic coverage of the mechanisms involved in the functions of the organ system of the body exclusive of the nervous system. The material will be presented in lecture and laboratory formats. PHSL 801 is taught in accordance with the School of Medicine calendar. Prerequisite: Consent of instructor. LEC

  PHSL 802 Medical Physiology (4). PHSL 802 is the second half of a two-semester course providing a systematic coverage of the mechanisms involved in the functions of the organ system of the body exclusive of the nervous system. The material will be presented in lecture and laboratory formats. PHSL 802 is taught in accordance with the School of Medicine calendar. Prerequisite: Consent of instructor. LEC

  PHSL 803 General and Electrophysiology (1). The following topics are presented: cell volume regulation; body fluid balance; membrane transport of water, non-electrolyte, and electrolytes; electrochemical energy; Nernst potential; membrane excitability properties in nerve. Prerequisite: Consent of instructor. LEC

  PHSL 804 Cardiovascular Physiology (2). Mammalian cardiovascular physiology principles are presented using lecture, laboratory, and computer simulation formats. Topics presented include: myocardial contraction, cardiac electrophysiology, electroradigraphy, myocyte cellular performance, hemodynamics, mechanisms of blood pressure control, vascular smooth muscle, exercise, hypertension, and heart failure. Prerequisite: PHSL 803 or an equivalent course and consent of instructor. LEC

  PHSL 805 Respiratory Physiology (1). Mammalian physiological principles are presented using lecture, demonstration and problem session formats. Topics presented include: 1) mechanics and control of breathing; 2) pulmonary, blood and tissue gas exchange and transport; and 3) acid-base regulation. Prerequisite: PHSL 803 and consent of instructor. LEC

  PHSL 806 Renal Physiology (1). The general principles of mammalian renal physiology are presented using lecture and problem session formats. Topics presented include: measurement of renal function, principles of filtration, renal blood flow, tubular transport and maintenance of salt, water, acid-base and potassium balance. Prerequisite: PHSL 805, PHSL 804, PHSL 805 and consent of instructor or Physiology in its entirety. LEC

  PHSL 807 Endocrinology (1). This course presents all aspects of the system, especially as related to humans. Hormone synthesis, secretion patterns, cellular mechanisms of action and feedback regulation are emphasized. Hormonal regulation of metabolic and reproductive processes are presented at molecular, cellular and integrative levels. Prerequisite: Consent of instructor. LEC

  PHSL 808 Gastrointestinal Physiology (1). A survey of the physiology and pathophysiology of the gastrointestinal tract emphasizing the Neural, Endocrine, and Paracrine Control of Motility, Secretion, Absorption and Digestion. Prerequisite: Consent of instructor. LEC

  PHSL 812 Cellular Electrophysiology (2). Areas of current interest in electrophysiology will be examined. These include the electrophysiology of excitable cells, epithelial electrophysiology, electrophysiology of stimulus-secretion coupling, optical measurement of membrane potentials, and control of membrane potential by patch clamps in small cells. Prerequisite: PHSL 803 or an equivalent course and consent of instructor. LEC

  PHSL 814 Transport, Permeability and Membranes (3). Description of biological membranes, physical chemistry of transport, diffusion, osmosis, specialized transport mechanisms and transport in specific tissues. Prerequisite: PHSL 805 or an equivalent course and consent of instructor. LEC

  PHSL 818 Pulmonary Gas Exchange, Blood Gas Transport and Acid Base Balance (3). This course will cover the following topics: 1) pulmonary gas exchange, ventilation/perfusion relationships and pulmonary gas diffusion; 2) transport of O2 and CO2 by the blood; and 3) regulation of the acid base balance of the intra- and extracellular fluid. Prerequisite: Graduate level course in mammalian physiology and permission of instructor. LEC

  PHSL 820 Advanced Renal Physiology (2). The physiology of the kidney will be covered with emphasis on glomerular function, nephron transport mechanisms, counter-current system, and renal mechanisms involved in acid-base balance. Prerequisite: PHSL 806 or an equivalent course and consent of instructor. LEC

  PHSL 821 Muscle, Nerve, and Heart Physiology (2). This course will consist of lectures on the following areas of physiology: general cellular phenomena, skeletal muscle, cardiovascular, and neurophysiology. Prerequisite: An undergraduate level course in mammalian physiology and consent of instructor. LEC

  PHSL 822 Advanced Human Physiology (4). This course consists of lectures on the following areas of physiology: general cellular phenomena, skeletal muscle, cardiovascular, renal, gastrointestinal, respiratory, endocrinology, neurophysiology and reproduction. Prerequisite: An undergraduate level course in mammalian physiology and consent of instructor. LEC

  PHSL 827 Physiological Instrumentation I (2). An introduction to modern instrumentation for biological research. The main objectives of this course are to gain an understanding of the basic theory of instrument function and an appreciation of the limitations of instrument application. The subject areas covered are basic electronics, control system theory, theory of measurement and detailed discussions of specific measurement areas such as blood pressure, and blood flow. Prerequisite: Consent of instructor. LEC

  PHSL 828 Physiological Instrumentation II (1-2). A practical laboratory seminar course in which the student is given the opportunity to deal with a specific instrumentation area or problem which is of special interest. Prerequisite: PHSL 827 and consent of instructor. LAB

  PHSL 832 Advanced Endocrinology (3). A lecture course dealing with the morphology, biochemistry and physiology of the endocrine system. The areas considered include the bio-synthesis, storage, secretion, transport, degradation, and the mechanisms of action of the hormones. Physical, chemical and biological techniques used to quantify hormones and their effects at the organ, cell and subcellular level will be discussed. Prerequisite: PHSL 806 or an equivalent course and consent of instructor. LEC

  PHSL 834 Reproductive Physiology (3). This course presents all aspects of reproductive physiology, ovarian and testicular function and neuroendocrine control of gonadotropins, puberty and hormone action in the adult. Prerequisite: PHSL 807 or an equivalent course and consent of instructor. LEC

  PHSL 836 Pregnancy, Growth, Development and Aging (3). This course is the second half of a two-semester sequence which presents all aspects of reproductive physiology, growth and development. Coverage begins at conception and ends with aging of the reproductive system. There will be several labs related with some of the lecture material. Prerequisite: PHSL 834 and consent of instructor. LEC

  PHSL 838 Advanced Topics (1-3). Special studies designed and arranged on an individual basis to allow a student to pursue a particular subject through reading, special laboratory work, and conferences with a senior staff member. LEC

  PHSL 840 Neuroscience (5). This course integrates human neuroanatomy, neurophysiology, neurochemistry, neuropathology, and basic neurology. Instruction formats include lectures, conferences, laboratories and demonstrations. (Same as Anat 840 and NEUS 840.) Prerequisite: PHSL 802 or an equivalent course and consent of instructor. LEC

  PHSL 844 Neurophysiology (3). Selected topics in the areas of synaptic transmission, sensory systems, motor systems and cognitive brain functions will be discussed using both lecture and student presentation formats. Evidence underpinning the neuronal system organization and function will be emphasized. Prerequisite: PHSL 842 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 and PHCL 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. Prerequisite: Advanced Neuroscience (ANAT 846; NEURO 846; PHSL 846) or consent of instructor. LEC

  PHSL 848 Molecular Mechanisms of Neurological Disorders (2). 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, amyothrophic lateral sclerosis, and prion diseases), gene-related diseases (e.g., lysosomal and peroxisomal disorders, Down's syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). 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

  PHSL 851 Seminar (1). Student participation conferences in which a sharply delineated field is examined in depth largely through critical
Molecular & Integrative Physiology; Pathology & Laboratory Medicine

review of current literature in the field. The subjects examined in these seminars are dictated by the interests of students and staff. LEC
PHSL 860 Cell Structure and Function (3). Lectures will describe the integration of structure and function of cellular components, including membranous organelles, cytoplasms, cytoskeletal elements, and the nucleus. The mechanisms by which cellular processes are regulated, both autonomously and in response to extracellular signals also will be presented. Specific processes to be examined include the import and export of water and ions, regulation of cell potential, biogenesis of organelles, the cell cycle, and signal transduction involving the plasma and other membranes. Prerequisite: Consent of course coordinator. LEC
PHSL 894 Module 4 of the IGPBS: Cell and Developmental Biology (5). This is module 4 of the first year curriculum for the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover the basic principles and advanced aspects of prokaryotic and eukaryotic cell biology. It will cover such topics as: structure/function relationships of membranes and organelle systems, ECM structure, and integrated aspects of protein processing and sorting, endocytosis. Early aspects of development such as the relationship of gene expression to embryonic pattern formation will also be covered. This course is co-listed as ANAT 895. LEC
PHSL 895 Module 5 of the IGPBS: Molecular and Physiological Basis of Disease (3). This is module 5 of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover the impact of disease on the major organ systems of the body using an integration of biochemical, molecular, structural, and physiological approaches. This course is co-listed as ANAT 895. LEC
PHSL 896 Module 6 of the IGPBS: BioGraphics (1). The objective of this course is to teach students how to organize data and how to present data in a clear and concise manner at national meetings. Students are taught basic principles of organizing data for presentation and then learn through the actual presentation of data in simulated platform sessions held in the course. Videotapes are made of the presentations 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. RSH
PHSL 999 Doctoral Dissertation (1-10). Preparation of the Dissertations 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. RSH

Neurosciences

See the School of Pharmacy chapter of this catalog.

Pathology and Laboratory Medicine

Interim Chair: Patricia Thomas
2017 Wahl Hall West, Mail Stop 3045
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-7070
www2.kumc.edu/pathology/pathweb
Graduate Adviser: Rebecca T. Horvat,
2017 Wahl Hall West, (913) 588-1753
Professors: Atkinson, Chiga, Damjanov, Pelling, Tawfik, Thomas
Associate Professors: Fishback, Horvat, Hsu, Persons
Assistant Professor: Cunningham

The department offers a graduate program and research opportunities with emphasis in molecular and experimental pathology, leading to the M.A. or the Ph.D. degree.

Degree Requirements

This curriculum is designed for advanced study in molecular and experimental pathology.

General Requirements. These requirements must be met for admission: baccalaureate degree, inorganic chemistry, organic chemistry, calculus, physics, biological sciences.

M.A. Degree Requirements. Graduate School requirements for the M.A. must be met. In addition, students must take P&O 800 or its equivalent and must have a minimum of 5 credit hours of work outside the Department of Pathology and Laboratory Medicine in fields related to molecular and experimental pathology. Additional course work is assigned according to each student’s individual needs.

Ph.D. Degree Requirements. Graduate School requirements for the Ph.D. must be met. In addition, students must take P&O 800 or its equivalent and must have a minimum of 10 credit hours of work outside the Department of Pathology and Laboratory Medicine in fields related to molecular and experimental pathology. Additional course work is assigned according to each student’s needs.

Pathology and Laboratory Medicine Courses

P&O 800 General Pathology (7). The basic mechanisms of human disease, including cellular pathology, inflammation, diseases of immunity, neoplasia, infectious and circulatory diseases and aging are considered through the mechanisms of laboratory, small-group problem based care study and autopsy demonstration. (Same as PAON 850) Prerequisite: Courses in cell biology, biochemistry, and physiology, or equivalents. LEC
P&O 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 lectures, problem based case study and autopsy participation. Since final comprehensive examination at the end of Pathology II will include material from both Pathology I and Pathology II. Prerequisite: Successful completion of Pathology LEC
P&O 802 Special Pathology (6). A detailed study of diseases involving the endocrine, genitourinary, neuromuscular, and skeletal systems. Prerequisite: P&O 800 and courses in histology, biochemistry, and physiology, or equivalent. LEC
P&O 899 Master’s Thesis (1-7). LEC
P&O 903 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, DNA probe, autopsy technique. LAB
P&O 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 uncalcified bone biopsy. Common primary bone tumors, and the mechanism of bone loss or bone growth caused by metastatic malignant tumors. There will be practical laboratory portion. Prerequisite: P&O 800 or permission of instructor. LAB
P&O 907 Infection and Immunity (1). Microbial factors, host reaction, and disease. Emphasis on recovery from infection, response to reinfection, 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: P&O 800. LAB
P&O 911 Research in Pathology (1-10). RSH
P&O 912 Advanced Topics (1-5). Offered by arrangement. Prerequisite: P&O 800, P&O 801, and P&O 802. IND
P&O 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: P&O 800. LEC
P&O 999 Doctoral Dissertation (1-7). LEC

THE UNIVERSITY OF KANSAS • 2009-05 GRADUATE SCHOOL CATALOG
Pharmacology, Toxicology, and Therapeutics

Chair: S.J. Enna
Graduate Adviser: Thomas Pazdernik
G034 Breidenthal, Mail Stop 1018
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-7500
www.kumc.edu/research/medicine/pharmacology/dhp

Professors: Bunag, Enna, Klaassen, J. Li, Pazdernik, Rozman
Professors Emeriti: Cheng, Doull, Maguire, Poisner
Associate Professors: Levant, McCarson, Reed

The Department of Pharmacology, Toxicology, and Therapeutics offers programs leading to Ph.D. and 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.

For a few students, a postgraduate training program is available in pharmacology and toxicology. Because the emphasis in training students is to provide the broad background needed in pharmaceutical sciences, our program encompasses a wide 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 biochemical, neurologic, autonomic, cardiovascular, drug metabolism, molecular, and endocrine.

Graduate work in the department is primarily for students planning to earn the Ph.D. degree. Although a master’s program is offered, the broad background required for work in pharmacology makes only the doctoral program practical for most students.

Admission Requirements

Most often, students entering the program hold undergraduate degrees in chemistry, biology, pharmacy, or veterinary medicine. Applicants must take the Graduate Record Examination.

Ph.D. Degree Requirements

In addition to the general requirements of the Graduate School, 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. Modules 1 through 7 of the Interdisciplinary Graduate Program in Biomedical Sciences core curriculum, which cover biochemistry, molecular biology, cell biology, and physiology.

3. PHCL 880 Essentials of Pharmacology, PTOX 917 Disposition of Xenobiotics, PTOX 918 Toxicology, PHCL 941 Neuro- and Immunopharmacology, PHCL 942 Cardiovascular and Endocrine Pharmacology.

4. Other courses considered necessary by sponsor and dissertation committee.

Course Requirements for the Ph.D. in Toxicology

1. Credit hours equivalent to at least three full academic years.

2. Modules 1 through 7 of the Interdisciplinary Graduate Program in Biomedical Sciences core curriculum, which cover biochemistry, molecular biology, cell biology, and physiology.

3. PHCL 880 Essentials of Pharmacology, PTOX 917 Disposition of Xenobiotics, PTOX 918 Toxicology, PHCL 941 Neuro- and Immunopharmacology, PHCL 942 Cardiovascular and Endocrine Pharmacology.

4. 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. Oral 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

Pharmacology Courses

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: 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

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. In addition, the enrollment card must be stamped by the instructor. LEC

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. In addition, the enrollment card must be stamped by the instructor. LEC

PHCL 764 Pharmacology of the Central Nervous System (1). General principles of the central nervous system, stimulants, 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. In addition, the enrollment card must be stamped by the instructor. LEC

PHCL 765 Chemotherapy (1). Principles of chemotherapy, sulfonamides, penicillins, aminoglycosides, anticancer and antifungal agents, antimalarials, broad spectrum antibiotics, antiparasitic agents, and anti-infectives. 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

PHCL 766 Blood-Endocrine Pharmacology (1). General principles of endocrine function and use, thyroid drugs, insulin, sex hormones, oxytocics, adrenal steroids, antiinflammatory agents, blood drugs, anticoagulants and vitamins. 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
PHCL 767 Toxicology (1). General principles of toxicology, clinical toxicology, solvents, metals, gases and dusts, corrosives, plant and animal toxins, pesticides, radiation, 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

PHCL 809 Seminar in Pharmacology (1). Weekly meetings. LEC

PHCL 826 History of Pharmacology (2). A discussion dealing with the literature and history of pharmacology. The development of the British school, German school and the origin of American pharmacology are emphasized. LEC

PHCL 841 Molecular and Cellular Pharmacology (4). Molecular foundations of drug action, including chemical structure of drugs, kinetics and consequences of drug-receptor interactions, and methods for characterizing receptors, and receptor-mediated events. Prerequisite: Permission of course director. LEC

PHCL 846 Advanced Neuroscience (5). Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the cellular, molecular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846 and PHSL 846). Prerequisite: Permission of course director. LEC

PHCL 848 Molecular Mechanisms of Neurological Disorders (2). 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). Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

PHCL 880 Essentials of Pharmacology (4). Introduction to Pharmacology for Graduate Students. Autonomic, Cardiovascular and Renal, Endocrine, Neuro, Antivirals Pharmacology. Laboratory Workshops. Historical and Contemporary Methods used to Elucidate Mechanisms of Drug Action. Prerequisite: Successful completion of the Interdisciplinary Program in Biomedical Sciences or permission of the Instructor. LEC

PHCL 881 General Principles of Pharmacology (1). General principles of pharmacology, including pharmacokinetics, pharmacodynamics, adverse effects, pharmacotherapeutics, plus miscellaneous agents (antacids, cathartics). Open to graduate students in Nursing, Allied Health, and other health related programs with adequate backgrounds in physiology and biochemistry. Independent study program with use of computer assisted instruction, textbooks, syllabi, consultation with staff and exams as primary teaching instruments. Prerequisite: Permission of department. LEC

PHCL 882 Pharmacology of the Autonomic Nervous System (1). General principles of the autonomic nervous system, cholinergic, muscarinics, nicotinics, neuromuscular blockers, beta adrenergics, alpha adrenergics and miscellaneous ANS agents. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 883 Cardiovascular-Renal Pharmacology (1). Antihypertensive drugs, antiarrhythmics, vasodilators, cardiac glycosides, serotonin, histamine, polypeptides, diuretics, antiplatelets. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 884 Pharmacology of the Central Nervous System (1). General principles of the central nervous system, stimulants, hallucinogens, depressants (hypnotics and sedatives), general and local anesthetics, antiparkinson agents, tranquilizers, analgesics and anxiolytics. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 885 Chemotherapy (1). Principles of chemotherapy, sulfonamides, penicillins, aminoglycosides, anticancer agents, antifungal agents, antimarials, broad spectrum antibiotics, antiparasitic agents, and antiseptics. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 886 Blood-Endocrine Pharmacology (1). General principles of endocrine function and use, thyroid drugs, insulin, sex hormones, oxytocics, adrenal steroids, antiinflammatory agents, blood drugs, anticoagulants and vitamins. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 887 Toxicology (1). General principles of toxicology, clinical toxicology, solvents, metals, gases and dusts, corrosives, plant and animal toxins, pesticides, radiation, miscellaneous. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 888 Pharmacology (9). Pharmacology covers the following topics: establishment of rational pharmacological basis for drug therapy; physiological and biochemical effects of drugs and foreign compounds on biological systems; mechanisms responsible for the therapeutic and toxic effects, uses, and disadvantages of drugs. Prerequisite: Consent of instructor. LEC

PHCL 890 Research in Pharmacology (1-10). For graduate students beginning their research training. RSH

PHCL 898 Principles of Pharmacology (1). Chemical fundamentals in structure, actions and metabolism of drugs and toxins. Included are molecular features of drugs and toxicants, stereoismom, receptor theory, dose-response relationships, agonists and antagonists, absorption, pharmacokinetics and structure-activity relationships. LEC

PHCL 899 Thesis in Pharmacology (1-10). For students in a master’s program in pharmacology. RSH

PHCL 901 Module 9 of the IGPBS: 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 interests and 5) confidentiality. LEC

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 and peripheral 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: Autonomic 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 effect on tissue cultures. Prerequisite: PHCL 888 or departmental permission. LEC

PHCL 924 Clinical Pharmacology (3). 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 pathiology, Mutagenesis, Genetics, Carcinogen metabolism, Radiation biology, Initiation and promotion, Tumor Immunology, Cell proliferation. Protooncogenes and suppressor genes. Hormonal carcinogenesis. Cancer epidemiology. Dietary and environmental causation and prevention. Cancer in various organ systems. (Same as P&O 939 and PTOX 939.) Prerequisite: One of the following: Biochemistry (BCHM 710), Cell Biology (ANAT 880), Pharmacology (PHCL 841), Toxicology (PTOX 841 or PTOX 918). LEC

PHCL 941 Neuro- and Immunopharmacology (2). Principles of basic, peripheral and central nervous system pharmacology and topics in immunopharmacology and neuroimmunopharmacology. Prerequisite: PHCL 841 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 autacoids with the cardiovascular system. Prerequisite: PHCL 841 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. RSH

---

**Toxicology Courses**

PTOX 841 Molecular and Cellular Toxicology (4). Molecular foundations of chemical action, including structure of chemicals, kinetics and consequences of chemical-receptor interactions, and methods for characterizing receptors, and receptor-mediated events. Prerequisite: Permission of course director. LEC
The University of Kansas

Midnight.

Dykes Library is open until midnight.

Examinations

During final examinations, Dykes Library is open until midnight.

Dykes Library

Saturday—9 a.m. to 6 p.m.

Sunday—1 to 9 p.m.

During final examinations, Dykes Library is open until midnight.

The 2004 edition of U.S. News America's Best Graduate Schools ranked KU's master of public health degree program second in the nation among public universities.

Pharmacology, Toxicology, & Therapeutics; Preventive Medicine & Public Health

PTOX 887 Toxicologic Pathology (4). Introductory pathology course for graduate students preparing for a career in basic toxicology research. Topics to be presented and discussed include: cell injury, inflammation, repair and regeneration, immunopathology, neoplasia, tumor pathology, respiratory pathology, liver pathology, neuropathology, 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, neuropathology, miscellaneous organ pathology, and lab animal clinical chemistry. LEC

PTOX 898 Principles of Toxicology (1). Chemical fundamentals in structure, actions and metabolism of toxicants and drugs. Included are molecular features of toxicants and drugs, stereoisomerism, receptor theory, dose-response relationships, agonists and antagonists, absorption, pharmacokinetics, and structure-activity relationships. LEC

PTOX 899 Thesis in Toxicology (1-10). For students in a master's program in toxicology. RSH

PTOX 917 Disposition of Xenobiotics (2). Principles of absorption, biotransformation, and excretion of xenobiotics. Prerequisite: PHCL 888 or departmental permission. LEC

PTOX 918 Toxicology (4). Selected topics in environmental, forensic, and industrial toxicology. LEC

PTOX 937 Advanced Disposition of Xenobiotics (1). Detailed discussion of the pharmacokinetics of chemicals and drugs; discussion of the p-450 system, its influence on the biological half-life and toxicity of xenobiotics. Prerequisite: PTOX 917 or departmental permission. LEC

PTOX 938 Advanced Toxicology (2). Individualized discussions dealing with the toxicity of xenobiotics. Subjects to be discussed are the mechanisms of toxic action of pesticides, solvents, metals, radiation, gases, and plant and animal toxins. Prerequisite: PTOX 918 or departmental permission. LEC


PTOX 940 Techniques in Industrial Toxicology (2). A unique course where students are exposed to and have practical experience in techniques used for risk-assessment of chemicals. The course is taught with extensive input by industrial toxicologists who use these techniques on a daily basis. This course is offered at a local industrial setting. Prerequisite: PHCL 888, PTOX 917, PTOX 918, and PTOX 916, or departmental permission. LEC

PTOX 990 Research for Dissertation in Toxicology (1-10). Prerequisite: PTOX 889, RSH

PTOX 999 Dissertation in Toxicology (1-10). Prerequisite: Open to students of advanced standing enrolled in the doctoral program in toxicology. RSH

Preventive Medicine and Public Health

Kansas City: Chair: Jasjit S. Ahluwalia

M.P.H. Director: Simon Choi

4004 Robinson Hall, Mail Stop 1008

KU Medical Center, 3901 Rainbow Blvd.

Kansas City, KS 66160, (913) 588-2775

www.kumc.edu/prevmed

Professors: Ahluwalia, Neuberger

Professors Emeriti: Chin, Holmes, Jerome

Associate Professors: Ellerbeck, Lai, Mayo

Assistant Professors: Catley, S. Choi, W. Choi, Engelman, Huang, Lee, Li, McCarter, Perera, Richter

Wichita: Acting Chair and M.P.H. Executive Director: Craig A. Molgaard

M.P.H. Director: Linda Frazier

The University of Kansas School of Medicine–Wichita

1010 North Kansas St., Suite 1300

Wichita, KS 67214-3199, (316) 293-2693

http://wichita.kumc.edu/prevmed

Professors: Dismuke, Molgaard

Associate Professors: Frazier, Fredrickson

Clinical Associate Professor: Early

The Departments of Preventive Medicine and Public Health on the Kansas City and Wichita campuses offer a Master of Public Health degree. The MPH program serves working health professionals who seek to enhance their ability to assess and respond to the health needs of communities and populations.

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 required before admission. Current enrollment in an advanced health professional degree program satisfies the experience requirements.

Applicants who have not received post-baccalaureate degrees must submit official scores from the Graduate Record Examination or an equivalent test of aptitude for post-baccalaureate study (e.g. Medical College Admission Test, Law School Admission Test, Graduate Management Admission Test). Applicants whose native language is not English must comply with Graduate School requirements for demonstration of English proficiency; no applicant whose Test of English as a Foreign Language score is lower than 570 (230 if applicant takes the computerized module) is considered.

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. Applicants must submit a résumé or curriculum vitae and are asked to prepare a personal written statement that describes their career goals and their motivation for seeking post-graduate training in public health.

M.P.H. Degree Requirements

Students must complete at least 36 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 14 credit hours in elective courses approved as part of the student’s academic program. Electives must include a 1-hour biostatistical laboratory. Students must complete 6 credit hours in a capstone sequence with two options: a thesis option (traditional thesis or publishable paper) based on research and a written thesis developed from that research and a nonthesis option based on a semester-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. By combining course work the two degrees may be completed in 59 credit hours instead of 79 hours. This program is designed especially for experienced baccalaureate-prepared nurses interested in community or public health. Full or part time study is available. Individual advising and career planning is done by faculty from the School of Nursing and the M.P.H. program. Concentrations include advanced community/public health nursing clinical specialization and the M.P.H. generalist program.

**Distance Education**

The KU–M.P.H. program offers distance education courses as a means of enhancing knowledge and skills for public health professionals and health care practitioners in counties at a distance from teaching sites in Wichita and Kansas City. It serves employed students who are unable to take all the traditional classes they wish because of schedule conflicts.

Instructional methods in mediated courses include readings, online discussions, two-way videoconferencing, videotaped presentations, self-paced CD-ROMs, and other technologies. Permission of the instructor is required before enrollment for each course. Each class is limited to a maximum number of students.

During distance education courses, students meet learning objectives that are essentially identical to objectives that would be met in an on-site class. Course requirements are no greater and no less than for classroom-based courses. The flexibility of a distance education environment allows students to complete courses while living at a distance from campus, or while attending to employment or family commitments during standard class times. However, these benefits come with additional responsibilities for the student. Online students must be self-directed, independent and organized to complete courses successfully.

Certain distance education courses have on-campus components, such as student presentations, which are defined in advance. In addition, students who plan to take 50 percent or more of their course work through the distance program must participate in a day-long orientation at matriculation and in a one and one-half day visit to campus each semester. These face-to-face sessions bridge the end of one semester to the beginning of the next one. While on campus, students net-work with their peers, make final presentations related to current course work, begin work on new courses through traditional classroom introductory sessions, and receive individual advising and mentoring. Students plan the capstone project with the faculty committee during these visits and present results of the project at the end of the experience. Supplementary visits to campus to complete capstone-related activities may be required by the student’s faculty committee.

- **Preventive Medicine and Public Health Courses**

Courses are offered on the Kansas City and Wichita campuses and in Web-based format. The location of each course is denoted by the following symbols:

- **KC** = Kansas City
- **W** = Wichita
- **Web** = Web-based format

**PRVM 800 Principles of Epidemiology** (3). KC, W, Web. 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 804 Principles of Statistics in Public Health** (3). W. 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 Community Health Seminar** (1). KC. This course will focus on research and experience in various aspects of community health, through study of research reports, journal materials, and review articles and reports of experts in the field. Students will be required to present one or more seminars on relevant topics such as nutrition, environmental health, health policy, health promotion, aging, health education or epidemiologic studies. LEC

**PRVM 806 Special Topics** (1-4). KC, W, Web. 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). KC. 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 or permission of instructor. RSH

**PRVM 808 Interdisciplinary Research Seminar** (1). KC. This seminar will present locally and nationally recognized clinicians and researchers to discuss various areas of public health and clinical research. The course is designed to expose MPH 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 students, and others. Prerequisite: Permission of instructor. LEC

**PRVM 810 Clinical Trials** (3). KC. The design, implementations, 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 Health Sciences, or permission of instructor. LEC

**PRVM 812 Public Health Biostatistical Laboratory** (1). KC. WC. 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. Students assess 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 Co-requisite: Biometry 811. LEC

**PRVM 814 Fundamentals of Biostatistics I** (3). KC. 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. LEC
Preventive Medicine & Public Health

PRVM 815 Surveillance and Control of Infectious Disease (3). KC, Web. 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, arthropod vectors, lower animals, and common sources. Special considerations are given to characteristics of the agent, host, and environment. The concepts of surveillance and control of strategies. Instruction is by lecture, seminars and problem-solving sessions. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 816 International Health (2). W. This course will deal with international health and disease and their effects on Americans at the individual and community levels. It will consider health problems of Americans going abroad and health problems brought to America by persons, animals, and objects coming from abroad. It will consider worldwide health problems and geographically contained health problems. It will consider America’s role via a global health, and the effects of foreign health problems in the United States. It will consider preventive health measures and the role of national and international health organizations. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 817 Fundamentals of Biostatistics II (3). KC. Second level statistics course that provides an understanding of more advanced statistical methods to scientific research with an emphasis on the application of statistical methodology to public health practice, public health research, and clinical research. Special focus upon linear regression and correlation of regression methodology and computer applications of such methodology. Prerequisite: PRVM 814. LEC

PRVM 818 Social and Behavioral Aspects of Public Health (3). KC, Web. Examinations of the role of social and behavioral sciences to examine issues underlying concepts of health and non-health; actions taken in response to symptoms or to promote health/prevent illness; interactions with health care systems; vulnerability to specific behaviors; and the effects of health on societal agreements and expectations. Prerequisite: Permission of instructor. LEC

PRVM 820 Community Health Promotion (2). KC. This course will acquaint the student with leading approaches to community health promotion, including the Centers for Disease Control model. Leading health education programs for community groups, business, and industry will be studied along with public school programs. Prerequisite: Permission of instructor. LEC

PRVM 822 Advanced Topics in Health Promotion (2). KC. This course will focus on patterns of occurrence and methods of change for control of risk factors for chronic disease in terms of related health habits. Instruments for measurement of the prevalence of risk factor health habits will be studied as well as epidemiologic data. Prerequisite: PRVM 820 or permission of instructor. LEC

PRVM 823 Field Experience in Community Health Education (1-3). KC. W. Internships with community agencies, community health programs and individuals concerning health issues as a basis for understanding the role of these factors in public health and their incorporation into strategies designed to address health needs of populations. Course draws on the clinical, social and behavioral sciences to examine issues underlying concepts of health and non-health; actions taken in response to symptoms or to promote health/prevent illness; interactions with health care systems; vulnerability to specific behaviors; and the effects of health on societal agreements and expectations. Prerequisite: Permission of instructor. LEC

PRVM 824 Health Hazard Appraisal and Risk Reduction (1-3). Study of appraisal processes for health hazard and risk reduction, including knowledge and application of current approaches to data gathering and analysis. Prerequisite: Permission of instructor. LEC

PRVM 825 Child and Family Health (3). Web. Family, maternal, and child health problems will be addressed. Topics will include prenatal care (maternal health and habits); fetal growth factors, well baby care (immunizations, nutrition, growth, development, behavior); 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 827 Public Health Administration (3). KC, Web. 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 basic administrative competencies necessary for the practice of public health. Particular emphasis is placed on case studies which examine how public agencies use public and private resources most efficiently, effectively, and equitably to maintain or improve the health populations. (Same as HP&M 861.) LEC

PRVM 830 Environmental Health (3). KC, W. This course will identify specific health effects of environmental contaminants and discuss principles of prevention. Specific problem areas will include air and water pollution, solid waste disposal, food preservation, radiation, industrial hygiene, occupational skin and lung diseases, chemical carcinogens and teratogens, noise, temperature, and accidents. A number of guest lecturers and field trips will be utilized. Prerequisite: Permission of instructor. LEC

PRVM 832 Environmental and Occupational Epidemiology (2). KC. Epidemiological concepts applied to problems in environmental and occupational health. The course will consider respiratory irritation and low dose effects, extrapolation from animals to man, synergism, multiple exposures, sensitive populations, and control (classification) groups. Illness of concern include cancer, respiratory disease, and reproductive disorders. The concepts of surveillance and control of strategies. Instruction is by lecture, seminars and problem-solving sessions. Prerequisite: PRVM 800, PRVM 830, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 836 Epidemiology in Aging (3). KC. An overview of the aging process, review of current knowledge of epidemic of selected diseases, such as dementia and osteoporosis, and falls that primarily affect aging individuals. Emphasis on epidemiologic designs, methods, and variables (e.g., response rate and measurements) that are pertinent to research on aging individuals. Prerequisite: PRVM 800, BMTR 811/PRVM 8 04, or permission of instructor. LEC

PRVM 838 Reproductive Epidemiology (3). W. Epidemiologic concepts applied to problems in reproductive health of men and women. Critical analyses of epidemiologic studies on sociocultural, individual and pregnancy-specific risk factors to reproduction. Field trips will be used to explore methods to reduce adverse reproductive health outcomes in populations (work sites, managed care organizations, local health departments). Literature synthesis skills are used in a project focused on preventing adverse reproductive outcomes in a defined population. LEC

PRVM 841 Advanced Epidemiologic Methods I (3). KC, W. Application of the principles of epidemiology and the techniques of statistical analysis to the solution of epidemiologic problems. Emphasis will be placed on theory and application of various statistical techniques in the analysis of epidemiologic data. Students will be directed toward application and interpretation of various methodologies. Skills necessary for thesis preparation will also be addressed. Prerequisite: PRVM 800, SAS, BMTR 811, or PRVM 814. LEC

PRVM 842 Advanced Epidemiological Methods II (3). KC. This course will concentrate on concepts and application of various statistical techniques in the analysis of epidemiologic 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 to design, conduct and interpret cross-sectional and national data. Prerequisite: Permission of instructor. LEC

PRVM 843 Obesity and Public Health (3). Web. Web-based course. Obesity is becoming epidemic and pandemic throughout the world. What are the personal public health consequences of this phenomenon? Are we as focused as we should be on the effects of this growing problem? This course reviews the basic definition of obesity and defines its known personal and public health effects: includes issues of bias and stigmatization. The course further examines the epidemiology, and future predicted consequences of obesity and then examines personal models of treatment followed by examination of public health efforts to date. Finally, proposed interventions and areas for research are discussed and evaluated. Students apply principles of behavioral change and communication to develop proposed public health approaches to ameliorating the obesity problem in children and adults. Prerequisite: PRVM 800. Principles of Epidemiology and PRVM 818. LEC

PRVM 844 Qualitative Methods in Public Health (3). W. Qualitative research has diverged from its anthropology roots to become common place 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 actual data collection using several methods. Students will present and discuss recent journal articles reporting qualitative studies in weekly “journal club” fashion. Students will present the results of their qualitative research in an oral class presentation and poster, and in an abstract submitted to a local, regional or national conference. This course is offered in Wichita. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 850 Cancer Epidemiology (2). KC. Epidemiology of major malignant disease is discussed. Emphasis is placed on the identification of populations at risk, etiologic factors and methods of prevention. Relevant information on tumor biology, immunology, and viral, chemical and physical carcinogenesis is presented. Problems unique to epidemiologic investigation of cancers are discussed. Prerequisite: PRVM 800 and BMTR 811/PRVM 804, or permission of instructor. LEC

PRVM 855 Seminar in Women's Health (2). This course will explore the changing patterns of health care and delivery that influence women's health. Health promotion and health care for women of all ages and backgrounds will be reviewed. Ethnicity and women's health, health policies related to women and new scientific develop-
PRVM 859 Tobacco and Public Health (2). 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 biologic factors that affect pharmacology and tobacco use such as the menstrual 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 rural areas or among clients with certain types of health insurance. 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: Permission of instructor. 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. In addition to the research which must result in one or more papers, there are seminars, guided readings, and tutorials. Prerequisite: Permission of instructor. LEC

PRVM 868 Seminar in Outcomes Management and Research (1). KC. Political, economic, and methodologic issues that affect health care quality and outcome measurement will be discussed and analyzed in this seminar. Visiting faculty expertise in outcomes research and management will present models for health care outcomes assessment and evaluation. (Same as HP&M 876 and NRSG 888.) LEC

PRVM 871 Data Management and Descriptive Epidemiology Using SAS (1). KC. Basic SAS software programming and data base management skills. Proficiency in SAS programming for basic descriptive epidemiology purposes. Instruction in publishable formatting and applications for basic measures of frequency, correlation and graphics production. Prerequisite: PRVM 800, PRVM 804/BMTR 811 or permission of instructor. LEC

PRVM 872 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. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 875 Management of Public Health Data (3). W. 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). Web. 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 890 Research in Public Health (3). KC, W. Research in community health, leading to the Master of Public Health degree. Prerequisite: PRVM 890, PRVM 818, BMTR 811/PRVM 804, and departmental approval. LEC

PRVM 891 Public Health Practicum (3). KC, W. Students will complete a practicum of at least 8 hours per week in a community health setting. (Same as NRSG 825) Prerequisite: PRVM 800, PRVM 818, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 893 Public Health Project (1-3). KC, W. 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). KC, W. 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.) LEC
School of Nursing

Karen L. Miller, Dean
Mail Stop 2029, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-1601

Master of Science Program in Nursing ...... 337
Admission ............................................................... 337
M.S. Degree Requirements .................................. 337
Advanced Practice Nursing .............................. 337
Nurse Midwife ............................................................ 337
Leadership ............................................................ 337
Post-master’s Certificate Programs ................. 337
Joint Degree Options ........................................ 337
Common Core ..................................................... 338
Advanced Practice Core ..................................... 338
Research ............................................................... 338
Clinical/Functional Specialization ..................... 338
Nursing/Cognate Elective ................................. 338
Thesis/Project Option ......................................... 338
Flexible Scheduling .............................................. 338

Doctor of Philosophy Program in Nursing .... 338
Program Options ................................................. 338
Admission Criteria .............................................. 338
Post-Master’s Option ......................................... 338
Post-Baccalaureate Option ............................... 338
Course Requirements .......................................... 339
Major: Nursing .................................................. 339
Minor: Area of Student Choice ......................... 339
Support Courses ................................................ 339
Joint Degree: M.B.A./Ph.D. in Nursing ............. 339

Nursing Courses ................................................. 339

Photo, page 334:
Common core nursing courses provide the core knowledge and skills essential to the nurse practicing in any advanced area of nursing.
School of Nursing

Karen L. Miller, Dean
G040 School of Nursing Building
Mail Stop 2029, KU Medical Center
3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-1601

Helen Connors, Associate Dean, Academic Affairs
2010 School of Nursing Building, (913) 588-1614
Fax: (913) 588-1660
soninfo@kumc.edu or www2.kumc.edu/son

Professors: Aaronson, Connors, Miller, Neuberger, Popkess-Vawter, Smith, Sullivan, Taunton, P. Williams
Professor Emerita: Chard
Associate Professors: Bleich, Boyle, Bridges, Clifford, Hamra, Langner, Pallikkathayil, Pierce, Rempusheski, Schorfheide, Teel, Wingate
Assistant Professors: Bergquist, Forbes, Koehler, Leenerts, Scheibmeir, Wambach, K. Williams
Assistant Professor Emerita: Carter

Academic programs at KU Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. Medical Center Graduate programs are components of KU’s Graduate School. The Office of the Dean of Graduate Studies at the Medical Center handles matters related to the graduate programs in Allied Health, Medicine, and Nursing.

Master of Science Program in Nursing

Admission
Regular admission to the Master of Science in Nursing program requires completion of a nationally accredited baccalaureate program in nursing, a graduate statistics course completed in the last six years, a course in physical assessment, an undergraduate average of B or above, being licensed 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. Applicants whose programs were not nationally accredited may request a special review.

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 nursing administrator.

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 tracks are available. In conjunction with the family nurse practitioner major, focus areas in psychiatric nursing and women’s health 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 women’s primary and reproductive health care needs throughout the life span.

The leadership major includes tracks in organizational leadership, public health nursing, and health care informatics. Each of these tracks requires 40 credit hours of specific courses. 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 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 Nurse Educator, Nurse Midwifery, Psychiatric Mental Health, and Outcomes Management and Research. 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 degree (organizational leadership) with the Master of Health Services Administration degree or the Master of Science in Nursing (public health nursing) with the Master of Public Health degree. By combining some course work, the two degrees may be completed in fewer hours than if they were pursued independently.

Photo, page 336: Advanced practice core courses in nursing provide the basis for expert clinical patient care.
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 area 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, research, and clinical or functional specialization segments. Forty-two to 45 credit hours are required for the clinical nurse specialist track, 44 to 46 hours for the nurse practitioner track, 57 for the nurse midwife track, and 40 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 750, NRSG 751, NRSG 752, NRSG 753, and NRSG 755.

Advanced Practice Core. Advanced practice core courses provide the basis for expert clinical patient care. Courses in this category are NRSG 809, NRSG 810, NRSG 811, NRSG 812, and NRSG 813.

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 in the area chosen. The student may choose clinical nurse specialist courses in nurse practitioner, nurse midwife, or leadership courses.

Leadership. Courses provide the theoretical basis for the organizational leadership track, the public health nursing track, and the health care informatics track. Courses in this category are NRSG 880, NRSG 820, NRSG 808, NRSG 885 and NRSG 826. The student must complete four of these five courses.

Nurse Midwife. Courses can be identified by their titles.

Flexible Scheduling. The majority of students in the Master of Science program are part-time students.

Most of these students are employed full time. Therefore, most classes are scheduled in the late afternoon and evening to accommodate these employed students. In addition, some courses are offered in a compressed format or on the Internet. These flexible schedules allow students to pursue graduate study without undue interference with work responsibilities. In addition, an option exists in which 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 Philosophy Program 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

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. A Ph.D./M.B.A. joint degree also is offered.

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. A score of 1,500 on the three-part Graduate Record Examination is required. If the GRE has been repeated, the highest total score is accepted.

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. A score of 1,500 on the three-part Graduate Record Examination is required.
5. Potential for leadership and scholarship in nursing should be demonstrated.

Applicants who do not meet the admission criteria are considered on an individual basis.

Course Requirements

**Major: Nursing.** The nursing portion of the doctoral program has three major components: empirics, theory, and clinical aesthetics. A total of 44 hours of course work is required.

**Theory (6 hours)**
- NRSG 951 Philosophy of Science and Theory Development in Nursing .............................................. 3
- NRSG 951 Middle-range and Practice Theories for Nursing Research and Practice ..................................... 3

**Empirics (31 hours)**
- NRSG 982 Qualitative Research I .......................................................... 3
- NRSG 982 Qualitative Research II .......................................................... 3
- NRSG 982 Measurement Strategies in Nursing Research I .......................................................... 3
- NRSG 982 Measurement Strategies in Nursing Research II .......................................................... 3
- NRSG 984 Quantitative Research Issues and Strategies .......................................................... 3
- NRSG 985 Measurement Strategies in Nursing Research II .......................................................... 2
- NRSG 959 Research Experience ....................................................................... 1-2
- NRSG 989 Doctoral Research .................................................................... 1-12
- NRSG 999 Dissertation .................................................................... 1-12

**Clinical Aesthetics (5 hours)**
- NRSG 960 History and Philosophy of Nursing ........................................................................ 3
- NRSG 962 Future Issues in Nursing ............................................................................. 2

**Special Topics (2 hours)**
- NRSG 963 Special Topics: ........................................................................ 2

**Minor: Area of Student Choice.** This includes 12 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, communications, economics, education, history, pathology, pharmacology, philosophy, physiology, political science, psychology, sociology, or any other area offered by the KU Graduate School.

**Support Courses.** This area requires these courses:

**Statistics (6 hours)**
- PRE 904 Regression Analysis ........................................................................ 3
- PRE 905 Multivariate Analysis ........................................................................ 3

The program also requires foreign language or research skills competence, satisfactory completion of comprehensive examinations, and dissertation defense.

**Post-Baccalaureate Entry Option.** Students in the post-baccalaureate 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 listed above, the following are required:

**Empirics**
- NRSG 754 Health Care Research ........................................................................ 3

**Theory**
- NRSG 748/NRSG 749: Theories of Practice and Research/Practicum .......................................................... 3

**Minor.** Twenty-one to 25 hours are required for the Advanced Practice focus.

**Total.** A total of 71 credit hours is required for Advanced Practice.

**Joint Degree: M.B.A./Ph.D. in Nursing**

The School of Nursing and the School of Business offer a joint Ph.D./M.B.A. degree program, for nursing students interested in moving into the administrative and teaching sectors of health care. The joint degree program allows the nurse to develop skills in the scientific study of health care issues (systems or clinical focus) as well as knowledge and expertise in the practical aspects of day to day management of a health system (from unit level to hospital system). This unique combination places the graduate in a position of strength for the changing health care field.

Applicants must be admitted to both programs, the Ph.D. in Nursing through the School of Nursing and the M.B.A. program through the School of Business. All applicants must submit scores for the Graduate Management Admission Test and the Graduate Record Examination. International applicants must submit scores for the Test of English as a Foreign Language. All examinations are administered by the Educational Testing Service, Princeton, New Jersey.

The combined M.B.A./Ph.D. in Nursing program consists of 53 hours of doctoral nursing courses and 40 hours of graduate business courses. The combined program takes four years to complete and results in separate M.B.A. and Ph.D. in Nursing degrees. Write or call the Nursing Student Affairs Office, (913) 588-1621, or the director of the M.B.A. Program, Lawrence campus, School of Business, Summerfield Hall, 1300 Sunnyside Ave., Room 206, Lawrence, KS 66045-7585, (785) 864-4254, for information.

**Nursing Courses**

**NRSG 505 Caregiving: Creating Partnerships with Families (2-3)**

Health theory, research and nursing practice specific to the family as a system of health care delivery are discussed. Issues of patient and family autonomy, advocacy and alliances with health care professionals are explored in relation to professional values. Health and functioning of clients and family caregivers are assessed in their environment considering economic, social, and cultural factors. Students may elect a 1 credit clinical practicum to implement nursing care with caregiving families. LEC

**NRSG 506 Nursing Case Management of the Older Adult (2-3)**

Develops a systematic approach to the comprehensive functional assessment and care coordination of the frail elderly. A variety of standardized assessment instruments are used to determine clients’ ability to function within their environment. These assessment data are then used to formulate and evaluate a service care plan utilizing appropriate intervention strategies. Ethical, legal and political issues are integrated. Knowledge and skills necessary for nursing case management are emphasized. Prerequisite: Senior level, Level II, or graduate level courses. LEC

**NRSG 507 Pain Management (2)**

Nursing process provides the framework to assess the clients’ pain, to plan and to effectively manage pain strategies. Pain as a subjective experience comprised of physiologic, cognitive, affective, cultural, and behavioral components and the impact of this experience on the clients’ family system is discussed. Differences between acute, chronic acute, and chronic non-malignant pain across the health-illness continuum and the range of therapeutic interventions available for effective management are addressed. The importance of evaluating pain control and communicating the selected plan to all members of the collaborative team is stressed. Prerequisite: Senior status or graduate student. LEC

**NRSG 608 Violence: The Forensic Perspective (2)**

This course is designed as an in-depth exploration of the seriousness of interpersonal violence (IPV) in our society and the impact violence has on health care. Assessment techniques to identify victims of interpersonal violence and intervention strategies are described. The forensics principles and standards of clinical practice and the role of health care providers in the new field are integrated throughout the course via case studies and lectures. Prerequisite: Senior status, RN licensure, Graduate level, or consent of instructor. LEC

**NRSG 609 Therapeutic Touch: The Krieger-Kunz Method (2)**

The Krieger-Kunz Therapeutic Touch (TT) method is examined as a consciously directed process of energy exchange during which the practitioner uses the hands as a focus for facilitating healing in the client system. Students are given the opportunity to learn beginning levels of centering, assessment of the human energy field, rebalancing for symmetrical and rhythmical energy flow, and process evaluation. Supervised practice sessions are included to ensure that student performance is within professional practice guidelines established for health professionals. Prerequisite: Senior status, RN licensure. Graduate Level, or consent of instructor. LEC
NRSG 510 Health Care at the End of Life (2). Complex issues that in-
fluence care for clients and their family systems at the time of and
surrounding death are provided for the focus of this course. Contemp-
atives surrounding death and dying as well as ethical, legal, cultural,
social, and financial issues are examined. The needs of individuals and
families surrounding death such as pain and symptom management,
psycho-spiritual care, and bereavement are discussed in relation to
contemporary causes of death. Collaborative role development with
other members of the health care team surrounding care of the dying
are explored. Prerequisite: Level III courses. Corequisite: NURS 496,
Professional Practicum. LEC

NRSG 514 Nursing, Health Care and Human Sexuality (2). A system-
atic approach to the study of sexuality in relation to assessment and
nursing care throughout the life span is discussed. Students examine
their own values and beliefs regarding varied lifestyles and diversities
in sexuality of individuals, families, and groups. The concept of
sexuality as it relates to the wellness-illness continuum will be exam-
ined. The effect of current trends in society on professionals and client
systems will also be explored. Prerequisite: Senior status, RN licen-
sure, Graduate level, or consent of instructor. LEC

NRSG 564 Health Care of Persons with Patterns of Addiction (1-2).
Health care implications for client systems with problems related to al-
cohol and other commonly abused chemicals are examined. Both
acute and chronic responses will be presented as effects upon the psy-
chosocial, biological, cognitive/perceptual and spiritual/belief dimen-
sions of the client system. Ethical and legal considerations will be
explored in conjunction with current research findings. Prerequisite: Se-
nior status, RN licensure, Graduate level, or consent of instructor. LEC

NRSG 565 Nursing Care of Persons with Patterns of Chemical De-
dependency: Practicum (2). Clinical application of the nurse’s role for
complex client systems with problems related to alcohol and other
drug abuse is the primary purpose of the course. Assessing clients and
planning interventions to restore system balance will be emphasized.
Resources appropriate for these clients within the community will be
investigated. This course is designed to complement the didactic
course NRSG 564 Health Care of Persons of Patterns of Addiction by
affording students opportunities for building experiential skills. Pre-
requisite or Corequisite: NRSG 564, Senior status, RN licensure, Grad-
uate level, or consent of instructor. LEC

NRSG 720 Introduction to Nursing Informatics (2). This course will
provide an overview of the role of informatics in nursing profes-
sion. Nursing information systems, artificial intelligence and micro and
mainframe computers. Interactive laboratory experiences will examine
microcomputer uses for problem solving in nursing education, nursing
practice, nursing administration. Prerequisite: Admission to the
graduate nursing program or consent of instructor. LEC

NRSG 721 Understanding and Changing Health Behavior (3). Stu-
dent 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 ac-
tions or activities that endanger wellness or cause illness. Internal
and external influences are considered. The problems encountered by per-
sons who are attempting to alter their own health behavior are
dressed. The role of nurses in changing health behaviors in individu-
als, families, communities, and the larger society are examined. Pre-
requisite: NRSG 720 or consent of instructor. LEC

NRSG 722 Scholarly Writing for the Health Professional (3). Devel-
opment of scholarly writing skills is emphasized to promote profes-
sional communication and to enhance professional image. Students en-
rolled 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 memoranda, letters, abstracts, and a manuscript.
Legale and ethical issues related to the publication process are ex-
plored. Prerequisite: Admission to the graduate program or consent of
instructor. LEC

NRSG 723 Advanced Practice Geriatric Nursing of the Frail Elderly
Adult (2). This course provides knowledge and skills necessary to
provide holistic care for the frail elderly client are emphasized in the advanced practice
nursing course. Physical and multidimensional functional assessments are
discussed as a basis for establishing functional approaches to care
and planning effective therapeutic interventions in various long-term care
settings. Strategies for coordination of services and collaboration with
an interdisciplinary team for comprehensive health care are inte-
grated throughout the course. Prerequisite: Admission to the graduate
program or consent of instructor (excludes students in the Adult/Geri-
atic Nursing track). LEC

NRSG 748 Theories: Bridge to Practice and Research (2). Theory
development and core analysis techniques provide the framework for
the study of concepts and theories from nursing and related disciplines.
These concepts and theories are used to guide therapeutic nursing in-
terventions and research for individual, family, and community client
systems. Systems theory and theories related to cultural environments
are analyzed to assess and intervene for complex systems. Prerequi-
site: Admission to the B.S.N. to Ph.D. graduate nursing program or
consent of instructor. Corequisite: NRSG 749. LEC

NRSG 749 Theories: Bridge to Practice and Research Practicum
(1). Selected individual, family, and community client systems are
examined in practice for consistency with theoretical and research litera-
ture. Field study and participant observations provide the means for
comparing findings from research and practice. Corequisite: NRSG
748. LEC

NRSG 750 Theories for Practice I: Individual, Family, and Group (2).
Basic elements of theory, theory development and critique are dis-
cussed. Theories as they relate to health and human functioning of in-
dividual, family and group client systems across the life span are ex-
plored. Developmental, structural, functional and interactional theo-
ries and related research are analyzed and critiqued. These theories from nursing and related disciplines are used as a guide for thera-
pic nursing interventions. Prerequisite: Admission to the graduate
nursing program or consent of instructor. LEC

NRSG 751 Theories for Practice I: Practicum (1). Selected concepts
are used in a practice setting for understanding and describing the
health and human functioning of individual, family, and group client
systems, and as a guide to identifying therapeutic nursing interven-
tions. Corequisite: NRSG 750. LEC

NRSG 752 Theories for Practice II: Organizations, Community, Cu-
ture, and Society (2). Organizational, sociological, and cultural theo-
ries in relation to the internal and external environments of complex
client systems are explored. Structural-functional, systems, economic,
power, and/or other macrotheories may be included. Critical compo-
nents of these theories are applied to issues of health and functioning
of organizations, communities, cultural groups and society through
assessments and proposed therapeutic interventions. Prerequisite: NRSG
750 or consent of instructor. LEC

NRSG 753 Theories for Practice II: Practicum (1). Selected organiza-
tional, sociological and cultural theories are applied in practice to the
analysis of health and functioning of complex client systems. Corequi-
site: NRSG 752. LEC

NRSG 754 Health Care Research (3). Methods for analyzing and con-
ducting research and evaluating research findings for use in practice
are explored. Research which focuses on health risks of client sys-
tems, practice guidelines, therapeutic management and on cost and
outcomes will be examined. Emphasis is placed on generating re-
search questions from theory and practice. Prerequisite: Admission to
graduate pro gram or consent of instructor. LEC

NRSG 755 Health Care Professionalism: Issues and Roles (3). Health
Care Professionalism in nursing as influenced by social, cul-
tural, political and economic forces interacting with complex client sys-
tems is examined. Issues that develop in the changing health care envi-
ronment that impact health and solutions to problems associated with
these issues are explored in relation to ethical and legal parameters.
Innovative methods and skills essential for nursing are developed in a
laboratory setting. Prerequisite: Admission to the graduate
nursing program or consent of instructor. LEC

NRSG 801 Analysis Variance (3). Methods for designed experiments
including one-way analysis of variance (ANOVA), two-way ANOVA,
repeated measures ANOVA, and ANCOVA are emphasized. Post-
ANOVA tests, power and testing assumptions required in NOVA
are discussed and applied. Outlier detection algorithms are also incorpo-
rated. Boxplots, histograms, and scatterplots are used to
display data. Prerequisite: PRE 710/711 or equivalent. Knowledge of
statistical software, basic statistical plotting methods, p-values, two-
sample t-test and simple linear regression is assumed. Cross-listed
with DMTR 801. LEC

NRSG 802 Qualitative Research I (2). Students explore various quali-
tative research methodologies such as ethnography, phenomenol-
ogy/hermeneutics, historiography, grounded theory and/or others.
Emphasis is placed on understanding the appropriateness of each methodology for
description and explanation of nursing phenomena. Experience is pro-
vided in problem formulation and development of the qualitative re-
search proposal. Practice in data collection methods and initial phases
of analysis is provided. Prerequisite: NRSG 720 or admission to the
doctoral program or consent of instructor. LEC

NRSG 809 Health Promotion and Complementary Therapies (3).
Current trends in health promotion and clinical preventive care across
the life span are examined. Specific guidelines for assisting clients to
maintain/improve health and/or prevent illness are reviewed. Atten-
tion is given to the roles of the health care provider and care recipient
in screening, communication, and counseling. The use of complemen-
tary and non-pharmacological therapies in assisting clients to achieve
goals of health promotion is examined. The recommendation and use
of non-pharmaceutical interventions will be evaluated based on re-
search findings related to selection of therapeutics and measurement of
expected outcomes following use of a particular intervention. Prere-
quisite: Admission to the graduate nursing program or consent of
instructor. LEC
NRSG 810 Advanced Health Assessment and Physical Diagnosis (2). Building upon basic health assessment, knowledge and skills for advanced clinical practice are discussed, described and demonstrated. The concept of clinical decision making for differential diagnosis will be introduced. Emphasis will be placed on the adult model; however, major expected differences in special populations will be presented. Corequisite: NRSG 811 Advanced Health Assessment and Physical Diagnosis. Practicum LEC

NRSG 811 Advanced Health Assessment and Physical Diagnosis: Practicum (1). Content learned in the co-requisite didactic course (NR810) will be applied in this practicum. Emphasis will be placed on the multi-disciplinary environment. Internal and external environmental factors, ethical, legal, and health policy issues related to the nurse practitioner role in the practice setting are analyzed. Prerequisite: NRSG 816 and NRSG 817, or consent of instructor. LEC

NRSG 812 Advanced Pathophysiology (3). An in-depth scientific knowledge base relevant to selected pathophysiological states confronted in primary care is explored. This information provides a basis for the formulation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age specific and developmental alterations are correlated with clinical diagnosis and management. Application is through age appropriate examples. Prerequisite: Admission to the graduate nursing program or consent of instructor. LEC

NRSG 813 Applied Drug Therapy (3). The clinical application of specific categories of drugs, commonly encountered in primary care settings is discussed. The use of protocols, pharmacokinetics, and the ethical/legal, and economic issues surrounding the advanced nurses’ role in prescribing and monitoring pharmacologic therapies in the ambulatory setting are explained. Factors such as age appropriate content related to pharmaceuticals, dosages, expected outcomes, and side effects of the drugs are discussed. First line versus second line drugs, alternate drugs, drug interactions, adjusting drug dosages, patient education, and complications related to drug therapy are addressed. The nurse’s role and responsibility related to data collection, problem identification, and consultation with the physician in explored. Application is made through age appropriate case studies. Prerequisite or Corequisite: NRSG 812, or consent of instructor. LEC

NRSG 814 Primary Care I: Management of Common Health Problems Throughout the Life Span (5). Common health problems seen in individuals and families through 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 registered nurse practitioners are analyzed. Strategies to manage common health problems, in urban and rural patients, are explored. Interventions to restore independence and family level of pre-illness health, and positive lifestyle behaviors are emphasized. Prerequisite: NRSG 809 and NRSG 810 and NRSG 811. Prerequisite or Corequisite: NRSG 750 and NRSG 751 and NRSG 812. Corequisite: NRSG 815. LEC

NRSG 815 Primary Care I Practicum: Management of Common Health Problems Throughout the Life Span (2). Opportunities to develop beginning 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 ethical, legal, 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: NRSG 814. LEC

NRSG 816 Primary Care II: Management of Complex Health Problems Throughout the Life Span (5). Complex health problems seen in individuals and families through the life span are discussed in this second sequential course. Applications of current research and theory based interventions appropriate for management by advanced registered nurse practitioners are analyzed. Strategies and protocols to manage complex patient problems, in urban and rural patients, are explored. Interventions to restore individual and family level of pre-illness health, including secondary and tertiary prevention, are emphasized. Prerequisite: NRSG 814 and NRSG 815. Prerequisite or Corequisite: NRSG 732, NRSG 753, and NRSG 813, or consent of instructor. Corequisite: NRSG 817. LEC

NRSG 817 Primary Care II Practicum: Management of Complex Health Problems Throughout the Life Span (2). Opportunities to develop intermediate 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 complex health problems. Internal and external environmental factors as well as ethical, legal, and economic concerns related to the presenting complex health problems are explored. Current research outcomes and theory based interventions appropriate for management by advanced practice nurse are stressed. Collaboration and consultation (including referrals) with appropriate health providers is emphasized. Corequisite: NRSG 814. LEC

NRSG 818 Primary Care III: Preceptorship (5). The theoretical, clinical, and role components of care as delivered by the nurse practitioner are implemented through an intensive supervised clinical practicum with seminar sessions. An opportunity is provided to apply advanced clinical decision making skills and research to the assessment, management, and evaluation of complex health care problems in the primary care setting. The client system for this experience includes individuals and families within the context of community. Emphasis is on increased independence and decision making in a multi-disciplinary environment. Internal and external environmental factors, ethical, legal, and health policy issues related to the nurse practitioner role in the practice setting are analyzed. Prerequisite: NRSG 816 and NRSG 817, or consent of instructor. LEC

NRSG 819 Advanced Pathophysiologic Assessment (3). Systems approach to advanced physical assessment, pathophysiology, principles of hemodynamic monitoring, electrocardiography, pulmonary airway monitoring, and neuromuscular monitoring in the evaluation of the acute care and/or surgical patients. Emphasis will be on the cardiovascular, pulmonary, and neurological systems and their relationship to the assessment and monitoring practices of the health care provider. Prerequisites: Permission of Instructor. LEC

NRSG 820 Topics in Community Health Nursing (1-5). Investigation of special health issues or problems relevant to appropriate client systems in community health nursing. Prerequisite: The graduate clinical course in community health nursing or consent of instructor. LEC

NRSG 825 Community Health Practice (3). Students will complete a practicum of at least 812 hours per week in a community health setting. Detailed guidelines are available upon request. (Same as PRVM 891) Prerequisite or Corequisite: NRSG 825, NRSG 826, and permission of instructor. LEC

NRSG 826 Global Perspective and Diversity in Health Care (2). Cultural receptivity is integrated into the collaboration, development, and implementation of health programs at the local, national, international, 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 introduced. Students will work with community of interest to understand their health and illness beliefs, identify barriers to health care access, integrate the historical, social, political and economic forces that impact health care. Together they plan and implement appropriate strategies to influence positive community outcomes. Prerequisite: NRSG 880 or consent of instructor. LEC

NRSG 827 Advanced Concepts Public Health Nursing (2). Public health is addressed in terms of common values and interests as well as particular client populations (vulnerable and at risk groups) across the life span. Health promotion and disease prevention for whole communities and selected vulnerable and at risk aggregates are 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, exploring, prioritizing, and implementing interventions for public health concerns. Ultimately, a grant proposal is developed to support the action plan. Prerequisite: NRSG 754, NRSG 808, PRVM 800 or consent of instructor. Corequisite: NRSG 828. LEC

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 interests, health related needs of 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 in a community/public health setting. (Same as PRVM 891) Prerequisite: NRSG 827 or permission of instructor. LEC

NRSG 830 Nurse-Midwifery in the Antepartal Period (3). Nurse-midwifery care during the antepartal period in healthy pregnant women is presented and analyzed. Strategies focusing on risk reduction and early identification of deviation from normal in this client system are examined. Complementary practice models demonstrating various management theories are described. Biopsychosocial and cultural aspects of pregnancy within the family structure environment are applied. Concepts of research, ethics, legal and political issues, nutrition, pharmacotherapeutics, health promotion, and selected high-risk deviation from normal are included. Prerequisite: NRSG 752, NRSG 754, NRSG 755, NRSG 809, NRSG 810, NRSG 812, NRSG 813, or consent of instructor. Corequisite: NRSG 831. LEC

NRSG 831 Nurse-Midwifery Antepartal Practicum (2). This clinical practicum centers on competencies for nurse-midwifery management of pregnant women and family client systems in various environments. Health promotion and risk reductions for preg are emphasized. Management experiences in the nurse-midwifery role include
Nursing Courses

antepartal risk-assessment, collaboration, co-management, and referral when medically necessary. Corequisite: NRSG 830. LEC

NRSG 832 Nurse-Midwifery in the Neonatal Period (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 six weeks of life are included. Research, ethics, legal and political issues, nutrition, pharmacotherapeutics, health promotion, and selected high-risk deviation from normal are included. Prerequisite or Corequisite: NRSG 830 or consent of instructor. Corequisite: NRSG 833. LEC

NRSG 833 Nurse-Midwifery Neonatal Practicum (1). Clinical competencies for nurse-midwifery management of well neonates up to the first six weeks of life are developed. Neonatal adaptation in a variety of environments is the primary focus. Management experiences include the nurse-midwifery role in collaboration, co-management, and referral as needed, during the early newborn period. Corequisite: NRSG 832. LEC

NRSG 834 Nurse-Midwifery in Women’s Health Care Practicum (2). Toward the midwifery management role in the intrapartum, immediate postpartal, and neonatal period are presented and analyzed. Intrapartal complications and emergency events are addressed. Care of the newborn in transition from intranatal to an extrauterine environment is explored. Complementary practice models demonstrating various management modalities are described. Conceptualization of the intrapartum, immediate postpartal, and newborn period is included. 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 educators 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 Care Across the Life Span (3). Psychological, sociological, and physiological issues of health and human functioning of the female client systems across the life span are explored. Theory and research based therapeutic management of acute, episodic, and chronic conditions that occur in communities and their families will be planned. Professional values including standards of practice, certification, cultural, legal and ethical issues, and professional roles will be addressed. The health care delivery system will be analyzed for cost effectiveness and patient satisfaction. Corequisite: NRSG 815, NRSG 817, NRSG 834, or consent of instructor. LEC

NRSG 836 Nurse-Midwifery in the Intrapartal Period (3). Nurse-midwifery care of uncomplicated mother/infant client systems through the intrapartal, immediate postpartal, and neonatal period are presented and analyzed. Intrapartal complications and emergency events are addressed. Care of the newborn in transition from intranatal to an extrauterine environment is explored. Complementary practice models demonstrating various management modalities are described. Conceptualization of the intrapartum, immediate postpartal, and newborn period is included. Development of beginning competencies for promotion clinical nurse-midwifery management of well neonates up to the first six weeks of life are developed. Neonatal adaptation in a variety of environments is the primary focus. Management experiences include the nurse-midwifery role in collaboration, co-management, and referral as needed, during the early newborn period. Corequisite: NRSG 832. LEC

NRSG 837 Nurse-Midwifery Intrapartal Practicum (2). Competencies for nurse-midwifery management according to national standards of practice for low risk healthy women during labor and birth are demonstrated. The role of the advanced nurse practitioner is addressed. Nurse-midwifery management practice provides experience in the role of care provider during normal labor and delivery and in collaboration, co-management, and referral when medically necessary. Corequisite: NRSG 830, or consent of instructor. LEC

NRSG 838 Nurse-Midwifery in the Postpartal Period (2). Midwifery philosophy and management for well women during the peripuerperium are conceptualized. Health promotion, maintenance and risk reduction focused on self-care, sexuality, and family planning of the mother/infant attachment and family system development are integrated into course content. Research, ethics, legal and political issues, nutrition, pharmacotherapeutics, health promotion, and selected high-risk deviation from normal are included. Prerequisite: NRSG 830 or consent of instructor. Corequisite: NRSG 832 or consent of instructor. LEC

NRSG 839 Nurse-Midwifery Postpartal Practicum (1). Clinical competencies in nurse-midwifery management to well women during the peripuerperium are demonstrated. Parent-infant attachment is assessed and strengthened. Management roles explore the nurse-midwifery role in collaboration, co-management, and referral during the peripuerperal or postpartal period as medically necessary. Corequisite: NRSG 839, LEC

NRSG 840 Nurse-Midwifery Integration Practicum (6). The theoretical, clinical and role components of care as delivered by the advanced nurse midwife student are implemented through an intensive supervised clinical practicum. Advanced professional midwifery clinical skills and evidence-based practice in the assessment, management and care of women and infants are applied. The client system for this experience includes well women, childbearing women and neonates in a variety of settings. Emphasis is on independent decision making bringing together the function, scope, and practice of nurse-midwifery. Prerequisite: NRSG 834, NRSG 838, or consent of instructor. LEC

NRSG 841 Nurse-Midwifery Professional Seminar (1). The historical origin and current impact of nurse-midwifery care as advanced practice nursing in both rural and urban environments explored. Discussions include a variety of professional issues related to the business of advanced practice nursing. Consideration is given to the professional, legal, political, and ethical dimensions of practice associated with the nurse-midwifery role internally and externally. Prerequisite: Admission to the graduate program or 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 (1). Advanced psychiatric assessment, and implementation of collaborative, individual, family, and group client systems of varying ages with chronic and complex alterations in mental health, such as schizophrenia, bipolar disorder, substance abuse, and dementia are the focus. Biobehavioral, rehabilitation, and psychoeducation frameworks are used in examining factors that contribute to alterations in functioning in the client system’s internal and external environment. These frameworks and outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 752, or consent of instructor. LEC

NRSG 845 Psychiatric Mental Health Nursing I: Short-Term Illness (2). Short-term mental health problems (e.g., crises and grief reactions) and psychiatric disorders (e.g., anxiety, depression, and behavioral problems) are discussed. Intervention frameworks such as biobehavioral, cognitive and crisis theories, and supporting outcome research are analyzed as they apply to individual, group, and family client systems across the life span. Focus is placed on developmental factors that relate to health promotion, disease prevention, symptom management, and behavior change. Professional issues that commonly occur in implementing the advanced practice role in psychiatric and mental health care are emphasized. Prerequisite: NRSG 730, or consent of instructor. LEC

NRSG 846 Psychiatric Mental Health Nursing I: Chronic Illness (2). Individual, family, and group client systems of varying ages with chronic and complex alterations in mental health, such as schizophrenia, bipolar disorder, substance abuse, and dementia are the focus. Biobehavioral, rehabilitation, and psychoeducation frameworks are used in examining factors that contribute to alterations in functioning in the client system’s internal and external environment. These frameworks and outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 752, or consent of instructor. LEC

NRSG 847 Psychiatric Mental Health Nursing I: Chronic Illness (2). Individual, family, and group client systems of varying ages with chronic and complex alterations in mental health, such as schizophrenia, bipolar disorder, substance abuse, and dementia are the focus. Biobehavioral, rehabilitation, and psychoeducation frameworks are used in examining factors that contribute to alterations in functioning in the client system’s internal and external environment. These frameworks and outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 752, or consent of instructor. LEC

NRSG 848 Psychiatric Mental Health Nursing II: Practicum (2). Individual, family, and group client systems with chronic and complex alterations in psychological functioning are managed. Selected theoretical frameworks such as biobehavioral, rehabilitation, and functioning are managed. Selected theoretical frameworks such as biobehavioral, rehabilitation, and psychoeducation frameworks are used in examining factors that contribute to alterations in functioning in the client system’s internal and external environment. These frameworks and outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 752, or consent of instructor. LEC

NRSG 849 Psychiatric Mental Health Nursing III: Practicum (3-5). The integration of the psychiatric mental health advanced practice nursing role is implemented. Students have opportunities to use diagnostic reasoning, psychotherapeutic interventions, interdisciplinary treatment plans, psychoeducation, consultation, referral, and research findings in the management and evaluation of culturally diverse clients from different age groups. Theory and research based nursing therapeutics and standards of practice are applied in an artful manner. Corequisite: NRSG 845, or consent of instructor. LEC

NRSG 850 Psychiatric Mental Health Nursing III: Practicum (3-5). The integration of the psychiatric mental health advanced practice nursing role is implemented. Students have opportunities to use diagnostic reasoning, psychotherapeutic interventions, interdisciplinary treatment plans, psychoeducation, consultation, referral, and research findings in the management and evaluation of culturally diverse clients from different age groups. Theory and research based nursing therapeutics and standards of practice are applied in an artful manner. Corequisite: NRSG 845, or consent of instructor. LEC

NRSG 851 Psychiatric Mental Health Nursing III: Practicum (3-5). The integration of the psychiatric mental health advanced practice nursing role is implemented. Students have opportunities to use diagnostic reasoning, psychotherapeutic interventions, interdisciplinary treatment plans, psychoeducation, consultation, referral, and research findings in the management and evaluation of culturally diverse clients from different age groups. Theory and research based nursing therapeutics and standards of practice are applied in an artful manner. Corequisite: NRSG 845, or consent of instructor. LEC
NRSG 852 Topics in Pediatric Nursing (1-5). Investigation of special problems of a selected client system (infants, toddlers, preschoolers, school-age children, or adolescents) 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 (5). This information system development life cycle process are presented with emphasis on determination and analysis of system requirements and system design that meet the identified health care information requirements. Object-oriented techniques will be introduced, including Unified Modeling Language and Unified Modeling Methodology, to facilitate process analysis and design proposal development. Prerequisites: NRSG 820 or consent of instructor. LEC

NRSG 854 Knowledge Management in Health Care (3). Knowledge management is the creation, communication, and leveraging of a health care organizations’ knowledge assets. 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 supporting 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 Care Information (2). Investigation of current issues and trends relevant to health care information. Prerequisite: One graduate course in information or consent of instructor. LEC

NRSG 856 Health Care Information Practicum (3). In collaboration with health care information faculty, preceptors, students design an experience to facilitate application of theoretical knowledge and research related to health care information. Emphasis is on the application of the information system development life cycle. Students analyze the leadership and technical behaviors of various information roles and negotiate an informatics project to be completed within the practicum. Prerequisite: All Common Core, Leadership Core, NRSG 853, BUS 738. Prerequisite (or Corequisite): NRSG 854, NRSG 855, NRSG 898 or consent of instructor. LEC

NRSG 857 Neonatal Nursing II (3). This is the second of two courses that integrates the physiologic, pharmacologic, and assessment skills and principles in determining appropriate care of the ill neonate. Current research and evidenced-based practices are used as the course framework. The effects of critical conditions on the growth and development of the neonate, including subsequent chronic health problems as well as the short- and long-term consequences to the child’s family are emphasized. Disorders of the gastrointestinal, renal, endocrine, hematologic, musculoskeletal, ophthalmologic, dermatologic, and immune systems will be discussed. The use of specific interventions and diagnostic procedures are demonstrated and applied in laboratory/clinical settings during forty hours of required clinical activities. Corequisite: NRSG 856 or consent of instructor. LEC

NRSG 858 Neonatal Nurse Practitioner Preceptorship I (5). This is the first of two preceptorship experiences which can be taken concurrently or in consecutive semesters. This preceptorship course will be a minimum of 300 clinical hours. Opportunities to apply knowledge and skills from advanced nursing role, theory, research, and neonatal clinical courses to the care of high risk neonates are provided. Emphasis is placed on therapeutic measures within a conceptual framework or model and applying findings from research related to the ill neonate. The client system will be the neonate and family. Prerequisite or Corequisite: NRSG 856 and NRSG 857 or consent of instructor. LEC

NRSG 859 Neonatal Nurse Practitioner Preceptorship II (5). This is the second of two preceptorship experiences which can be taken concurrently or in consecutive semesters. This preceptorship course will be a minimum of 300 clinical hours. Opportunities to build upon knowledge and skills gained during Preceptorship I regarding the advanced therapeutic management of high risk neonates. Emphasis is placed on therapeutic measures within a conceptual framework or model and applying findings from research relevant to comprehensive care of neonates. The client system will be the neonate and family. Prerequisite or Corequisite: NRSG 858 or consent of instructor. LEC

NRSG 860 Health Care at The End of Life (3). Complex issues that influence care for clients and their family systems at the time of and surrounding death provide the focus for this course. Contemporary attitudes surrounding death and dying as well as ethical, legal, cultural, social, and financial issues are examined. The needs of individuals and families surrounding death such as pain and symptom management, psycho-spiritual care, and bereavement are discussed in relation to contemporary causes of death. Collaborative role development with other members of the health care team surrounding care of the dying are explored. Prerequisite: Admission to graduate program. 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 neurologic, musculoskeletal, and dermatologic systems and infections are examined. Physical and multidimensional functional assessments are emphasized as a basis for establishing differential diagnosis and planning effective therapeutic interventions. Coordination of services and collaboration with an interdisciplinary team for comprehensive health care are integrated throughout the course. Prerequisite: NRSG 810. Prerequisite or Corequisite: NRSG 750, NRSG 809, NRSG 812, NRSG 813, or consent of instructor. Corequisite: NRSG 863 or NRSG 864. LEC

NRSG 863 Adult/Gerontological Health Care I: Practicum—CN (3). 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 pharmacologic and medical therapeutics is provided. Nursing therapeutic and case management based on theory and research are applied in a variety of community and institutional practice settings. Emphasis is on health promotion and health maintenance for culturally diverse adult individuals and groups. Corequisite: NRSG 862 Adult/Gerontological Health Care I. LEC

NRSG 864 Adult/Gerontological Health Care I: Practicum—NP (3). 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 pharmacologic and medical therapeutics is provided. Nursing therapeutic and case management based on theory and research are applied in a variety of community and institutional practice settings. Emphasis is on health promotion and health maintenance for culturally diverse adult individuals and groups. Corequisite: NRSG 862 Adult/Gerontological Health Care I. 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. Clinical manifestations of and patient response to selected problems of cardiovascular, respiratory, renal, urinary, endocrine, reproductive, gastrointestinal and immunologic systems, infections, and oncological problems are examined. Physical and multidimensional functional assessments are emphasized as a basis for establishing differential diagnosis and planning effective therapeutic interventions. Coordination of services and collaboration with an interdisciplinary team for comprehensive health care are integrated throughout the course. Prerequisite: NRSG 752, NRSG 862, or consent of instructor. Corequisite: NRSG 866 or NRSG 887. LEC

NRSG 866 Adult/Gerontological Health Care II: Practicum—CNS (2). Management of the primary, acute and chronic health care needs of a culturally diverse population of adults across the life span with specific system dysfunction are explored. Clinical practice will include interdisciplinary coordination for comprehensive managed care. Consultative, patient education, quality improvement, and project development activities will be the major foci. Corequisite: NRSG 865 Adult/Gerontological Health Care II. LEC

NRSG 867 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. Opportunities to manage pharmacologic and medical therapeutics is provided. Nursing therapeutic and case management based on theory and research are applied in a variety of community and institutional practice settings. Emphasis is on health promotion and health maintenance for culturally diverse adult individuals and groups. Corequisite: NRSG 865 Adult/Gerontological Health Care II. LEC

NRSG 868 Adult/Gerontological Health Care III: Preceptorship—CNS (3-5). The theoretical, clinical, and research role components of care as delivered by the adult/gerontological nurse practitioner are implemented. Opportunities are provided to utilize diagnostic reasoning, nursing therapeutics, pharmacological therapeutics, interdisciplinary treatment plans, project development, consultation, research, professional and family consultation, and research findings in the management and evaluation of culturally diverse clients experiencing specific system dysfunction. The client system for this preceptorship includes adults (and their families) experiencing a selected system dysfunction. Emphasis is on stabilization of the client, minimization of complications, and promotion of optimal level of health through an interdisciplinary approach. Prerequisite: NRSG 862 Adult/Gerontological Health Care I, and NRSG 865 Adult/Gerontological Health Care II, or consent of instructor. Prerequisite or Corequisite: NRSG 755. LEC

NRSG 869 Adult/Gerontological Health Care III: Preceptorship—NP (3). The theoretical, clinical, and research role components of care as delivered by the adult/gerontological nurse practitioner are implemented. Opportunities are provided to utilize diagnostic reasoning,
Dual degrees are offered for M.S. in Nursing/M.H.S.A. or M.P.H. students and Ph.D. in Nursing/M.B.A. students.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

A Directory of Courses appears on pages 5-6 as an aid to finding course descriptions.

Nursing Courses

nursing therapeutics, pharmacological therapeutics, interdisciplinary treatment plans, consultation, referral, and research findings in the management and evaluation of clinical clients with common ambulatory care problems. The client system for this preceptorship includes adults (and their families) across the life span. Emphasis is on preventing illness, promoting health and optimal functional level, stabilizing the ill client, and minimizing complications through an interdisciplinary approach. Prerequisite: NRSG 862 Adult/Gerontological Health Care I; and NSG 865 Adult/Gerontological Health Care II; or consent of instructor. Prerequisite or Corequisite: NRSG 755. 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 and defining curricula, program planning, theory and practice, policy, and research evaluation methods that create a learner centered environment. Attention is given to the relationship between the setting, methodologies of clinical teaching, and the assessment of competencies. Prerequisite: NRSG 752, 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 discussing curricular and program planning theories and practical applications of research, and evaluation methods that create a learner centered environment. Attention is given to frameworks for program evaluation, methods of data collection, and the ethics and standards of evaluation practice. The influence of societal trends, and current health professions issues relevant to societal needs and developing educational curriculum to meet those needs. Matters of diversity, work force development, ethics/legal issues in curriculum planning and education are also included. Prerequisite: NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 872 Topics in Nursing Education (1-5). Investigation of special issues or problems relevant to appropriate client systems (client, family, and student or health care professional) in Nursing Education. Prerequisite: Consent of instructor. LEC

NRSG 873 Teaching With Technologies (3). Theories and trends that support the use of nursing technologies for the enhancement of teaching and learning are explored. The focus is on assisting educators to gain skills in choosing appropriate instructional technologies to enhance learning. Learning variables, the environment context, functional-political issues, and the influence of those variables on technologies are examined. The evaluation and impact of current technology on the delivery of education are examined along with strategies for considering/anticipating future technologies to meet educational needs. LEC

NRSG 874 Nurse Educator Preceptorship (3). The role components of the nurse educator are implemented with a preceptor in selected educational settings. Opportunities are provided to utilize teaching and learning strategies, research, and evaluation methods with diverse students. Professional issues, educational trends, changing role of the educator, and self-assessment are incorporated in accompanying modules. Prerequisite: Completion of NRSG 870, NRSG 871, NRSG 873. LEC

NRSG 875 Women’s Health: Adolescence and Young Adult (5). The role of the advanced practice nurse is examined in relation to environmental and age related factors that result in complex health problems in the young adult female and the childbearing family. Theoretical concepts and research are explored as a basis for advanced family assessment and nursing practice decisions. Factors that maintain system balance or result in system imbalance for pregnant and non-pregnant young adults and for childbearing families including the neonate are examined and interventions are designed, 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 or Corequisite: NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 876 Women’s Head 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 complex health problems in the young adult female and the childbearing family are examined. Prerequisite or Corequisite: NRSG 752, NRSG 754, or consent of instructor. LEC

NRSG 880 Organizational Foundations for Leading Change (2). Self-discovery as a leader, manager, and follower is emphasized in this course. Analysis and prediction of an organization’s capacity for change, based on its stage of development, are introduced. Issues that constrain and destabilize organizations and strategies to restore equilibrium are explored. Prerequisite (or Co-requisite): NRSG 752 or consent of instructor. LEC

NRSG 881 Applied Budgeting and Finance (3). Leaders apply basic principles associated with program, project and service line fiscal management, price-setting, budgeting/break-even analysis, managed care contracting, and interpreting financial ratios while concurrently acquiring a financial vocabulary 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. Staffing models 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 Quality Management (3). This course integrates outcomes management and research. Through projects, site visits, readings, and class discussions, students develop an informed basis for leading quality improvement efforts in various health care settings. Upon completion of the course, the student will be able to contribute to the planning and management of outcomes-based quality improvement programs; describe central issues in measuring functional status, quality of life, adherence to guidelines, customer satisfaction, and costs; articulate the potential rewards and costs of quality improvement; and use scientific evidence on health care outcomes to quality management; and use techniques that are common in quality management. Same as HP&M 863. LEC

NRSG 884 Topics in Organizational Leadership (2). Investigation of current and futuristic 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 for analyzing and evaluation processes of care delivery and their 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 with regard to translating nursing science and research into practice. Linkages between program evaluation and regulatory policy are studied. Prerequisite: NRSG 754 (or Co-requisite): NRSG 880 or consent of instructor. LEC

NRSG 887 Measurement in the Evaluation of Health Services (3). 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. Students are exposed to a range of measures including single response items and frequency measures such as rates and ratios, as well as multiple-item indexes and scales. Students apply techniques for establishing comparability, such as ranging of measures, and placed on understanding the sources of measurement error and the assessment and improvement of reliability and validity of measures. In addition, students are exposed to the process of translating clinical practice guidelines, quality indicators, or other health service outcome objectives into data collection instruments such as questionnaires or abstraction schedules for use with medical records. Finally, students learn how to use the measurement interface with other methodological issues such as selection of study populations and choice of statistical analytic techniques. (Same as HP&M 870.) Prerequisite: PrVM 800 or HP&M 821 or equivalent; and NRSG 886 or HP&M 856 or HP&M 857, or equivalent; or consent of instructor. LEC

NRSG 888 Seminar in Outcomes Management and Research (1). Students admitted to the Certificate in Outcomes Management and Research 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 improve clinical, financial, and quality-of-outcome outcomes of medical health care interventions. Prerequisite: Admission to the Certificate in Outcomes Management and Research program or permission of instructor. LEC

NRSG 889 Grant Writing (3). All aspects of preparing grant applications are covered. This student 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 are covered. (Same as ANT 869 and HP&M 878.) Prerequisite: 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. LEC
NRSG 890 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). Appropriate prerequisite courses, as approved by the Independent Study faculty adviser, must be completed.LEC

NRSG 898 Research Project in Nursing (2). Portions of the research process in an area of nursing are implemented. Emphasis is placed on experiential knowledge of the actual conduct of research. The student selects 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 clinical or administration track course. LEC

NRSG 950 Philosophy of Science and Theory Development in Nursing (3). Emphasis is placed on the development and nature of science and structure of scientific theories especially relevant to the development of nursing science. Students conduct a historical review of the philosophical and scientific trends in theory development in nursing. Strategies for analysis and derivation of concepts, statements, and theories are practiced. Metatheoretical and grand theoretical structures and processes for theory development are examined and critiqued. Prerequisite: Admission to the doctoral program and/or consent of instructor. LEC

NRSG 951 Middle-Range and Practice Theories for Nursing Research and Practice (3). Middle-range and practice theoretical structures and processes for theory development are examined and critiqued. Emphasis is placed on continued analysis of theories and their relationships with research and practice. The focus is on the fit between theoretical and operational foundations of research. Students conduct an extensive review of the literature on phenomena of concern to nursing to analyze theoretical development and empirical referents. Strategies for synthesis of concepts, statements, and theories are practiced. Prerequisite: NRSG 950 or consent of instructor. LEC

NRSG 952 Qualitative Research II (3). Students conduct fieldwork to implement a qualitative research proposal. Emphasis is placed on advanced application of the various qualitative methodologies. Extended experience in qualitative data analysis is provided, including both interpretive and more structured approaches. Advanced technologies for collection and analysis of data are utilized. Prerequisite: NRSG 802 and NRSG 950, or consent of instructor. FLD

NRSG 953 Measurement Strategies in Nursing Research I (3). Classical measurement theory and related measurement concepts are considered in this course. Students examine various approaches to instrumentation. They also use existing data to refine selected measures. Reliability and validity are emphasized in the evaluation of item and scale characteristics, and the students prepare manuscripts formatted for publication. Basic knowledge of concept analysis is expected prior to enrollment. Prerequisite or Corequisite: NRSG 950 or consent of instructor. LEC

NRSG 954 Quantitative Research Issues and Strategies (3). Descriptive, correlational, and experimental methods of research are emphasized and applied to the investigation of phenomena in nursing. Advantages and disadvantages of certain research methodologies are studied in depth as they relate to nursing problems. Hypotheses relating to current nursing variables are derived, and appropriate methodology is supplied to the generated hypothesis. Prerequisite: NRSG 950 and PRE 904, or consent of instructor. LEC

NRSG 955 Measurement Strategies in Nursing Research II (2). Students generate an instrument relevant to nursing practice, education, or research, and develop a proposal for testing it. They also critically analyze published reports of instrumentation for research. The consideration of various approaches to measurement begun in NRSG 953 Measurement Strategies in Nursing Research I is extended to include generalizability theory and item response theory as well as biophysical measures. Prerequisite: NRSG 953 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 appropriate, develops a publishable manuscript. Prerequisite: Consent of instructor. FLD

NRSG 960 History and Philosophy of Nursing (3). The development of nursing as a discipline is examined from a historical perspective. Philosophical issues that have perplexed nurses through the ages are also addressed. The social, philosophical, ethical, economic, cultural, and political forces which impact on the course of nursing history are examined. Prerequisite: NRSG 950 or consent of instructor. LEC

NRSG 962 Futuristic Issues in Nursing (2). Emphasis is placed on social, ethical, cultural, economic and political issues impacting nursing, nursing education and health care in the future. The framework of futurism, including futuristic analysis and forecasting methodologies, is used for examining the issues. Leadership strategies for influencing social policy decisions are discussed. Prerequisite: NRSG 950 or consent of instructor. LEC

NRSG 965 Special Topics: _____ (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 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. RSH

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. RSH
School of Pharmacy

Hospital Pharmacy ................................... 349
Admission ............................................................... 349
M.S. Degree Requirements .................................. 349
Facilities ................................................................. 349
Pharmacy Practice Courses ..................................... 349

Medicinal Chemistry ...................................... 350
Admission ............................................................... 350
M.S. Degree Requirements .................................. 351
Ph.D. Degree Requirements ................................ 351
Facilities ................................................................. 351
Medicinal Chemistry Courses ................................. 351

Neurosciences ............................................. 352
Programs ............................................................... 353
Admission ............................................................... 353
M.S. Degree Requirements .................................. 353
Ph.D. Degree Requirements ................................ 353
Core Curriculum for the Ph.D. in Neurosciences .. 353
Neurosciences Courses ............................................. 354

Pharmaceutical Chemistry ....................... 354
Admission ............................................................... 354
M.S. Degree Requirements .................................. 354
Ph.D. Degree Requirements ................................ 354
Prerequisites ........................................................... 354
Special-interest Courses ......................................... 355

Precomprehensive Biannual Review ...................... 355
Foreign Language or Research Skills
Requirement ........................................................... 355
Comprehensive Examination .................................. 355
Seminar Requirements ............................................. 355
Dissertation ............................................................ 355
Takeru Higuchi & Nigel Manning Intersearch
Ph.D. Program ........................................................... 355
Financial Aid ........................................................... 355
Facilities ................................................................. 355
Pharmaceutical Chemistry Courses ......................... 356

Pharmacology & Toxicology ....................... 356
Admission ............................................................... 356
M.S. Degree Requirements .................................. 357
Ph.D. Degree Requirements ................................ 357
Course Work ............................................................ 357
Research Skills Requirement .................................... 357
Comprehensive Examinations .................................. 357
Dissertation ............................................................ 357
Facilities ................................................................. 357
Pharmacology & Toxicology Courses ......................... 357

Takeru Higuchi & Nigel Manning Intersearch
Ph.D. Program ........................................................... 358

Photo, page 346: The Department of Medicinal Chemistry has research facilities for about 60 graduate students, postdoctoral associates, and research technicians.
The School of Pharmacy offers graduate programs through the Departments of Medicinal Chemistry, Pharmaceutical Chemistry, Pharmacology and Toxicology, and Pharmacy Practice. 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. All of the graduate studies programs offered by the School of Pharmacy leading to the M.S. and Ph.D. degrees are under the control and supervision of the Graduate School. Since the requirements for admission and baccalaureate preparation may vary with each department, the requirements of each department or program are discussed separately.

Inquiries and correspondence about graduate studies in the areas described should be addressed to the program or department of interest.

Graduate application fees are as follows:
- Domestic students applying online: $45
- Domestic students applying on paper: $55
- International students applying online: $55
- International students applying on paper: $60

Hospital Pharmacy
Chair: Harold N. Godwin
Malott Hall, 1251 Wescoe Hall Dr., Room 6050
Lawrence, KS 66045-7582, (785) 864-4881
www.pharm.ku.edu/php/phpr.html
Graduate Adviser: Harold N. Godwin
Mail Stop 4040, KU Medical Center
3910 Rainbow Blvd., Kansas City, KS 66160
(913) 588-2330
Professors: Fincham, Godwin, Howard, Matchett
Associate Professors: Henry, Lacy, Oszko, Shireman
Clinical Associate Professor: Generali
Assistant Professor: Grauer
Clinical Assistant Professors: Backes, Barnes, Coulardy, Davidow, Eng, Moeller, Ragan, Scott, Spicer, Woods

Admission
In addition to meeting the general requirements for admission to the Graduate School, 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 to the Graduate School online at www.graduat.ku.edu. Forward all requested supporting application documents to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

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 thesis, 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 an American Society of Health-System Pharmacists accredited residency, 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 501 Pharmacy Practice I Introduction to Clinical Pharmacy Skills (1).
- PHPR 503 Pharmacy Practice III Pharmaceutical Care Fundamentals (4).
- PHPR 600 Nuclear Pharmacy Practice (2).
- PHPR 612 Pharmacoeconomics and Outcomes (3).
- PHPR 614 Pharmacy Management (4).
- PHPR 619 Health Care Systems (3).
- PHPR 622 Drug Information and Biostatistics (3).
- PHPR 625 Pharmacotherapy I (3).
Hospital Pharmacy; Medicinal Chemistry

PHPR 626 Pharmacotherapy II (3).
PHPR 627 Pharmacotherapy III (3).
PHPR 628 Pharmacotherapy IV (3).
PHPR 631 General Clinical Clerkship (4).
PHPR 635 Problems in Pharmacy Practice (1-5).
PHPR 636 Law/Ethics (3).
PHPR 637 NTDP Rounding Clerkship I (4).
PHPR 638 NTDP Clerkship II (4).
PHPR 639 NTDP Clerkship III (4).
PHPR 640 NTDP Clerkship IV (4).
PHPR 641 NTDP Clerkship V (4).
PHPR 643 Nutrition Support Advanced Clerkship (4).
PHPR 646 Pharmacotherapy I (4).
PHPR 647 Pharmacotherapy II (4).
PHPR 648 Pharmacotherapy III (4).
PHPR 649 Drug Information (5).
PHPR 650 Family Practice Advanced Clerkship (4).
PHPR 651 Biostatistics (3).
PHPR 652 Drug Information Advanced Clerkship (4).
PHPR 653 Home Healthcare 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 Renal Medicine Advanced Clerkship (4).
PHPR 660 Cardiology Advanced Clerkship (4).
PHPR 661 General Pediatrics Advanced Clerkship (4).
PHPR 662 Gastroenterology Advanced Clerkship (4).
PHPR 663 Critical Care Advanced Clerkship (4).
PHPR 664 Geriatrics Advanced Clerkship (4).
PHPR 665 Advanced Specialized Clerkship I (4).
PHPR 666 Psychopharmacy Advanced Clerkship (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 (4-6).
PHPR 677 Ambulatory Care Advanced Clerkship II (4).
PHPR 678 Pharmaceutical Industry Clerkship (4).
PHPR 679 Hospital Pharmacy; Medicinal Chemistry (4).
PHPR 680 Advanced Specialized Extensirh 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 Extensirh I (4-6).
PHPR 687 Hospital Extensirh II (4).
PHPR 688 Long-Term Care Advanced Clerkship (4).
PHPR 689 Pediatric Critical Care Advanced Clerkship (4).
PHPR 690 Community Service Clerkship (4).
PHPR 691 Diabetes Advanced Clerkship (4).
PHPR 692 Veterinary Medicine Clerkship (4).
PHPR 694 Drug Utilization Review Clerkship (4).
PHPR 695 Investigational Drugs Clerkship (4).
PHPR 696 Community Extensirh I (4-6).
PHPR 697 Community Extensirh 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 (2). 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 (with a special emphasis on pharmaceutical programs, services, and products). The purpose of the course is to provide the student with the tools to conduct economic rather than general evaluation of health care programs and services. There will be some discussion of theoretical concepts, but the major emphasis will be on practical methodological issues in economic evaluation of pharmaceutical programs. The course integrates the perspectives of pharmaceutical and health care technology assessment, managed care, outcomes research, and public health. The main topics covered in the course include: cost, cost-minimization, cost-effectiveness, cost-utility, and cost-benefit analyses. LEC

PHPR 860 Seminar in Pharmacy Practice (1). Research reports, reviews, and/or presentations on the current status of various aspects of pharmacy practice. Prerequisite: Consent of instructor. LEC

PHPR 865 Advanced Institutional Pharmacy Services. (3). A course dealing with 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. RSH

Medicinal Chemistry

Chair: G.L. Grunewald
Graduate Adviser: J. Aubé, jabe@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582, (785) 864-4495
www.pharm.ku.edu/medchem

Professors: Aldrich, Aubé, Blagg, Dutta, Georg, Grunewald, Hanzlik, Mitscher, Schonbrunn

Courtesy Professors: Benson, Hanson, Vander Velde, Williams

Adjunct Professors: Flynn, Schloss

Admission

The 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, the general admission requirements of the Graduate School must be met.

Applications are evaluated by the entire faculty. Applications must be supported by official transcripts (two copies) 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. Admission decisions are the consensus of the entire faculty and are based on grade-point averages for previous college work (particularly in the relevant science areas), letters of recommendation, previous research or employ-
ment experience relevant to the graduate training being sought, and GRE scores. 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 is usually about 10 a year.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.S. Degree Requirements
Candidates for this degree must satisfy the general requirements of the Graduate School as well as those of one of the following options:
1. Students who are proceeding toward the Ph.D. degree at KU must satisfactorily complete the course work requirement for the Ph.D. and pass a comprehensive oral examination.
2. 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, a thesis representing at least 10 credit hours of research, and an oral examination.

Ph.D. Degree Requirements
If credit has not already been obtained in the courses below or their equivalents, students must complete the following undergraduate courses as early as is practical in the graduate program: two semesters of physical chemistry (CHEM 646 and CHEM 648), mammalian physiology (BIOL 646), and biochemistry (BIOL 658 and BIOL 665). Satisfactory completion of a qualifying examination in organic chemistry also is required.

Required graduate course work includes

Medicinal Chemistry
MDCM 720 Bibliography of Medicinal Chemistry
MDCM 725 Organic Medicinal Agents I: Neuroeffector Agents
MDCM 726 Organic Medicinal Agents II: Homeostatic Agents
MDCM 727 Organic Medicinal Agents III
MDCM 777 Advanced Laboratory Techniques in Medicinal Chemistry
MDCM 780 Synthetic Organic Medicinal Agents
MDCM 790 Principles of Drug Design
MDCM 799 Seminar in Medicinal Chemistry (Lecture Seminar)
MDCM 799 Seminar in Medicinal Chemistry (Research Seminar)
MDCM 999 Doctoral Dissertation

Organic Chemistry
CHEM 740 Principles of Organic Reactions
CHEM 742 Physical Organic Chemistry I
CHEM 763 Organic Synthesis I
CHEM 766 Spectroscopic Identification of Organic Compounds

Plus two of the following:
MDCM 742 Experimental Pharmacology
MDCM 755 Chemistry of the Nervous System
MDCM 765 Natural Products of Medicinal Significance
MDCM 860 Drug Metabolism
MDCM 950 Advanced Topics: ______
MDCM 952 Introduction to Molecular Modeling
CHEM 963 Organic Synthesis II

A series of monthly written cumulative examinations is used to assess students’ knowledge of medicinal and organic chemistry. These examinations must be passed at an accelerating rate during the second and third years. After completing the cumulative examinations and the major part of course work and other requirements, the student takes an oral comprehensive examination. After completing this examination satisfactorily, the student prepares an original research proposal for presentation to the faculty of the department. The final requirement for the Ph.D. is the preparation and defense of a dissertation based on original laboratory research conducted by the candidate.

All general requirements of the Graduate School, such as those related to the comprehensive oral examination, the dissertation, and the dissertation defense, are detailed in the General Information chapter of this catalog.

Facilities
The department has research facilities for about 60 graduate students, postdoctoral associates, and research technicians. These are in Malott Hall on the Lawrence campus, which also houses the Departments of Chemistry and of Pharmacology and Toxicology. The Anschutz Library is adjacent to Malott Hall. 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.

Several university-wide service laboratories for biochemical services, X-ray crystallography, nuclear magnetic resonance, computational chemistry, instrument design, mass spectrometry, and tissue culture are in Malott Hall, along with a modern animal facility. These services have professional staff who provide training in specialized research techniques in addition to their service functions.

- Medicinal Chemistry Courses
MDCM 514 Introduction to Drug Analysis (3).
MDCM 621 Medicinal Biochemistry (5).
MDCM 622 Medicinal Biochemistry Laboratory (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 720 Bibliography of Medicinal 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 pharmacology, biochemistry, and medicinal chemistry. LEC
MDCM 725 Organic Medicinal Agents I: Neuroeffector Agents (2). The advanced study, from the molecular viewpoint, of the organic substances used as medicinal agents, including consideration of their origins, chemical properties, structure-activity relationships, metabolism and mechanisms of action; this course emphasizes drugs affecting the central nervous system. Prerequisite: Graduate Standing in Medicinal Chemistry. LEC
MDCM 726 Organic Medicinal Agents II: Homeostatic Agents (2). A continuation of MDCM 725 with emphasis on autonomic and cardiovascular agents and peripherally-acting hormones. Prerequisite: Graduate Standing in Medicinal Chemistry. LEC
MDCM 727 Organic Medicinal Agents III (2). A continuation of MDCM 725 and MDCM 726 with special emphasis on vitamins and anti-cancer, antiviral, antibacterial, and antifungal agents. Prerequisite: Graduate Standing in Medicinal Chemistry. 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 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 (3). A detailed study of the molecular aspects of nerve transmission will be covered with spe-
Medicinal Chemistry; Neurosciences

MDCM 990 Postdoctoral Research in Medicinal Chemistry (1-12). Advanced level research in collaboration with a faculty member, which may involve current research in one or more of the following areas: chemical 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

Neurosciences

Co-director: Elias K. Michaelis, emichaelis@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7582, (785) 864-4001
Co-director: Paul D. Cheney, pcheney@ku.edu
3011 Wahl Hall East (A), Mail Stop 3043
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-7400

 Participating Faculty Members: Aldrich (Medicinal Chemistry), P. Atchley, (Psychology), R. Atchley, (Psychology), Audus (Pharmaceutical Chemistry), Barlow (Speech-Language-Hearing: Sciences and Disorders), Berman (Anatomy and Cell Biology), Borchardt (Pharmaceutical Chemistry), Cheney (Molecular and Integrative Physiology), Chertoff (Hearing and Speech), Colombo (Psychology), Dobrowsky (Pharmacology and Toxicology), Durham (Otolaryngology), Enna (Pharmacology, Toxicology, and Therapeutics), Festoff (Neurology), Floor (Biochemistry, Cell, and Molecular Biology), Fowler (Pharmacology and Toxicology), Grunewald (Medicinal Chemistry), Hill-Karrer (Molecular and Integrative Physiology), Illardi (Psychology), Imig (Molecular and Integrative Physiology), Karrer (Mental Retardation Research Center, Cognitive Neuroscience Laboratory), Kelly (Molecular Biosciences), Klein (School of Medicine, Faculty Development), Krulleaf (Anatomy and Cell Biology), Kumar (Center for Neurobiology and Immunology Research), Levant (Pharmacology, Toxicology, and Therapeutics), LeVine (Molecular and Integrative Physiology), Lundquist (Mol. Hlth. Sci.), McCarson (Pharmacology, Toxicology, and Therapeutics), Michaelis (Pharmacology and Toxicology), Michaels (Pharmacology and Toxicology), Mitchell (Center for Neurobiology and Immunology Research), Nudo (Molecular and Integrative Physiology), Orr (Molecular Biosciences), Pazdernik (Pharmacology, Toxicology, and Therapeutics), Radel (Occupational Therapy), Rice (Speech-Language-Hearing: Sciences and Disorders), Schreiber (Psychology), Seifert (Pharmacology and Toxicology), Smith (Molecular and Integrative Physiology), Voogt (Molecular and Integrative Physiology), Wang (Molecular Biosciences), Warren (Human Development and Family Life), 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.
Graduates can pursue careers in university teaching and research or conduct and supervise research in a pharmaceutical/biotechnology company or government laboratory.

**Programs**

Neuroscience research 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 (psychology, human development), biology, chemistry, engineering, neuroscience, or pharmacology. 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, molecular biology. Students who do not have sufficient training complete appropriate courses before admission. The program requires the 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 to the Graduate School online at www.graduate.ku.edu. For all requested supporting application documents to The University of Kansas Graduate School Graduate Applications 1450 Jayhawk Blvd., Room 300 Lawrence, KS 66045-7535

**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 outlined 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 by the Graduate School.

**Ph.D. Degree Requirements**

Neuroscience courses are subdivided into core courses that all students must complete and elective courses 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. Students also receive training in the responsible conduct of research and in 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**

<table>
<thead>
<tr>
<th>KU Lawrence</th>
<th>KU Medical Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year One, Fall Semester</strong></td>
<td><strong>Year One, Fall Semester</strong></td>
</tr>
<tr>
<td>Advanced Biochemistry</td>
<td>Module 1: Protein Structure, Thermodynamics, Kinetics</td>
</tr>
<tr>
<td>Biobehavioral Neuroscience Cell Biology Lab rotations Neuroscience Seminar</td>
<td>Module 2: Cell Metabolism Module 3: Molecular Biology Lab rotations</td>
</tr>
<tr>
<td><strong>Year One, Spring Semester</strong></td>
<td>Neuroscience Seminar</td>
</tr>
<tr>
<td>Advanced Neuroscience</td>
<td>Module 4: Cell and Developmental Biology Module 5: Molecular and Physiological Basis of Disease Lab rotations Faculty research seminar series Neuroscience Seminar</td>
</tr>
<tr>
<td>BIOL 646 Mammalian Physiology Research Skill-One lecture course or one laboratory course Lab rotations Faculty research seminar series Neuroscience Seminar</td>
<td></td>
</tr>
<tr>
<td><strong>Year Two, Fall Semester</strong></td>
<td><strong>Year Two, Fall Semester</strong></td>
</tr>
<tr>
<td>Scientific Integrity</td>
<td>Bio-Behavioral Neuroscience</td>
</tr>
<tr>
<td>Cell and Molecular Neuroscience</td>
<td>Cell and Molecular Neuroscience First Elective for Molecular and Cell Metabolism or Cognitive and Systems Neurosciences Second Elective for Molecular and Cell Metabolism or Cognitive and Systems Neurosciences</td>
</tr>
<tr>
<td>First Elective for Molecular and Cognitive and Systems Neurosciences</td>
<td>Neuroscience Seminar</td>
</tr>
<tr>
<td>Second Elective for Molecular and Cognitive and Systems Neurosciences</td>
<td>Year Two, Spring Semester</td>
</tr>
<tr>
<td>Neuroscience</td>
<td><strong>Year Three, Fall/Spring</strong></td>
</tr>
<tr>
<td>Neuroscience Seminar</td>
<td>Dissertation Research</td>
</tr>
<tr>
<td><strong>Year Three, Fall/Spring</strong></td>
<td>Year Four, Fall/Spring</td>
</tr>
<tr>
<td>Completion of written and oral comprehensive exam</td>
<td>Dissertation Research</td>
</tr>
<tr>
<td><strong>Year Four, Fall/Spring</strong></td>
<td>Year Four, Fall/Spring</td>
</tr>
<tr>
<td><strong>Dissertation Research</strong></td>
<td><strong>Dissertation Research</strong></td>
</tr>
</tbody>
</table>

Students must complete one core course from Biobehavioral Neuroscience, one from the Cell and Molecular Neuroscience, and one from General Neurobiology below, 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.

**Biobehavioral Neuroscience**

Brain Disorders and Neurological Disorders (3) Biological Bases of Mental Retardation (4) Psychotropic Drugs Through the Life Span (5) Biobehavioral Plasticity and Development (3) Biological Foundations of Psychopathology (3)

**Cell and Molecular Neuroscience**

Cellular and Molecular Neurobiology (3) Chemistry of the Nervous System (3)

**General Neurobiology**

Advanced Neuroscience (3)

**Neuroscience Seminar**

Seminar in Neuroscience

**Scientific Integrity**

Issues Scientific Integrity (1)

**Teaching Experience**

Neuroscience Teaching Principles

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 advisor and begins an independent research project.

Continued enrollment in the bi-weekly neuroscience seminar is required, and students present at least two seminars during their graduate careers. In

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
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 complete a research skill. Commonly used areas are radiobiology 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 in the general area of the doctoral research, written in NIH format, and a oral examination on the proposal and on general knowledge in neuroscience and related fields.

Neurosciences Courses

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 participate in this seminar series throughout their period of training. Each student must 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 group leader and lecturer in a limited number of class sessions. Each student will meet with faculty 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 (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. (Same as MDCM 801, PSY 801, and PHCH 801.) Prerequisite: Graduate standing in the Neuroscience program. 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 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. Prerequisite: Advanced Neuroscience (ANAT 846; NURO 846; PHSY 846) or 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 mentor/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 neurosciences. Prerequisite: Graduate standing in the Neuroscience program post-oral comprehensive examination and consent of mentor/instructor. LEC

Pharmacology 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.

The Center for Biomedical Research combines several biomedical research units that have brought KU to international prominence in this field.

Neurosciences; Pharmaceutical Chemistry

Professors: Audus, Borchardt, Lunte, Middaugh, Schöneich, Siahaan, Stella, Stobaugh, Topp, Wilson

Associate Professor: Munson

The Department of Pharmaceutical Chemistry was established at KU in 1967 by the late Takeru Higuchi. Higuchi was among the first pharmaceutical scientists to recognize and to teach that drug substances are chemicals and their properties are governed by well-established physico-chemical principles.

Success in understanding drug action, in controlling drug delivery across biological membranes and to a drug receptor site, and in the development of stable formulations and the design of sophisticated (bio)analytical methods requires a thorough understanding of the basic aspects of analytical, biophysical, organic, and physical chemistry. These principles are equally important for the development of traditional small-molecule drugs and for emerging biotechnology products such as peptides, proteins, polynucleotides, and oligonucleotides. Pharmaceutical chemistry at KU includes pharmaceutics, physical pharmacy, preformulation, formulation, pharmaceutical analysis, and bioanalytical chemistry.

Admission

Students with bachelor’s or master’s degrees in chemistry, pharmacy, biological sciences, material science, chemical engineering, related disciplines, or Pharm.D. degrees are eligible to apply. Admission is based on grade-point average (minimum of 3.0 on a 4.0 scale), the Graduate Record Examination (verbal, quantitative, and analytical), letters of recommendation, and research experience. Prospective students should submit a completed domestic or international application form, official transcripts from all undergraduate institutions attended, three letters of reference, and results from a recent GRE examination. Students whose native language is not English should submit Test of English as a Foreign Language scores.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to The University of Kansas Graduate School

Graduate Applications

1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.S. Degree Requirements

M.S. students are eligible to apply. Admission is based on grade-point average (minimum of 3.0 on a 4.0 scale), the Graduate Record Examination (verbal, quantitative, and analytical), letters of recommendation, and research experience. Prospective students should submit a completed domestic or international application form, official transcripts from all undergraduate institutions attended, three letters of reference, and results from a recent GRE examination. Students whose native language is not English should submit Test of English as a Foreign Language scores.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

The University of Kansas Graduate School

Graduate Applications

1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

M.S. Degree Requirements

Except under unusual circumstances, the department does not recruit M.S. degree students. However, all students who pass the comprehensive written and oral examinations for the Ph.D. degree earn a nonthesis M.S. degree. A student seeking a terminal M.S. degree must complete 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.

Ph.D. Degree Requirements

Prerequisites. Entering students should have completed the standard sequence in calculus plus elementary differential equations, a course in physical chemistry emphasizing thermodynamics, and an introduc-
After satisfying course
Comprehensive Examination.
may all fulfill the research skills requirement.

865), animal methods (BIOL 704), and the writing and
ology (BIOL 718), pharmaceutical analysis II (PHCH
metabolism (MDCM 860), cell culture techniques
121), electronics for scientists (CHEM 711), drug
biometry (BIOL 841), radioactive material handling

If a student has successfully completed an equiva-
ent course at another institution with a grade B or bet-
ter, it is not necessary to repeat that course.

Special-interest Courses. Students may select addi-
tional special-interest courses in consultation with
the research mentor and/or dissertation committee. Some
recent special-interest courses have included
BIOL 672 Gene Expression
BIOL 688 The Molecular Biology of Cancer

There are 18 general laboratories and an experimental
search Laboratories, a state-of-the-art, 30,000-square-
foot, two-story research facility, completed in 1996.
The department is on West Campus in the Simons Re-

The expected back-
ground includes
MATH 320 Elementary Differential Equations
CHEM 640 Biological Physical Chemistry or
PHCH 625 Pharmacokinetics

Highly recommended:
CHEM 740 Principles of Organic Reactions
CHEM 742 Physical Organic Chemistry I
PHCH 801 Issues of Scientific Integrity
PHCH 862 Pharmaceutical Equilibrium
PHCH 864 Pharmaceutical Analysis
PHCH 866 Pharmaceutical Mass Transport
PHCH 972 Mechanisms of Drug Deterioration and Stabilization
PHCH 976 Advanced Topics in Biopharmaceutics and
Pharmacokinetics I

Precomprehensive Biannual Review. Progress in
course work is reviewed biannually, and the student
has the opportunity to present a summary of research
gress to the faculty. The student receives feedback
about progress and future expectations. Typically, after
two to two-and-one-half academic years, most students
have demonstrated sufficient progress in didactic and
experimental work to be eligible for the comprehen-
sive written and oral examinations. All students must
be eligible to take the comprehensive examinations
after three years (three fall and spring semesters), or
they are asked to leave the program.

Foreign Language or Research Skills Requirement.
Before taking the comprehensive written and oral ex-
aminations, students must complete the FLORS re-
quirement. Students must either demonstrate compe-
tence in a foreign language in which there is a substani-
tial body of scientific literature or complete an accept-
able skills development course. Research skills in
biometry (BIOL 841), radioative material handling
(BIOL 702, BIOL 703), computer programming (C&PE
121), electronics for scientists (SCIENTH 711), drug
metabolism (MDCM 860), cell culture techniques
(BIOL 756), gene expression (BIOL 672), molecular bi-
ology of cancer (BIOL 888), laboratory in molecular bi-
ology (BIOL 718), pharmaceutical analysis II (PHCH
865), animal methods (BIOL 704), and the writing and
defense of an original research proposal (PHCH 974)
may all fulfill the research skills requirement.

Comprehensive Examination. After satisfying course
work and demonstrating research skills, the student is
eligible to take the preliminary qualifying examination.
This evaluates the student's background in the basic
biological, chemical, and physical sciences central to
research in pharmaceutical chemistry. The written ex-
amination is largely derived from, but not limited to,
departmental courses, seminar presentations, and re-
search experience. The oral examination usually fol-
ows the written exam within three to five days. It al-
lows the committee to explore any areas of apparent
weakness revealed by the written exam and to review
the adequacy of performance in course work, re-
search, and seminars. After successfully completing
the written and oral exams, the student is qualified as a
Ph.D. candidate.

Seminar Requirements. All graduate students must at-
tend the weekly departmental seminar. Seminars con-
sist of presentations by guest speakers, faculty mem-
bers, and students. After one year of residence, gradu-
ate students present regular seminars. Seminars may
be based on progress in research or on a literature re-
view of work related to research.

Dissertation. Before the end of the first semester, each
student must choose a faculty research adviser. In con-
sultation with the student, the adviser selects a disserta-
tion research project, follows the student's progress in
course work and research, and chairs the student's com-
prehensive oral examination committee and dissertation
defense committee. Each Ph.D. candidate must submit
and defend a dissertation resulting from research of suf-
cient originality and quality for publication in peer-re-
viewed scientific journals. These investigations are con-
ducted under the supervision and guidance of the fac-
ulty adviser, with input from the dissertation committee
and normally require from 18 to 24 months of sustained
effort. A minimum of three academic years in residence
is required for the Ph.D. degree.

Takeru Higuchi and Nigel Manning Intersearch Ph.D.
Program. The KU School of Pharmacy offers a joint
program leading to the Ph.D. degree with the Victorian
College of Pharmacy in Melbourne, Australia. See the
Intersearch section in this chapter of the catalog for
further information.

Financial Aid
Most students receive financial support upon admis-
sion, usually a research assistantship. No special appli-
cation for financial support is required. Stipends are
competitive. The department also offers Takeru
Higuchi and Siegfried Lindenbaum Fellowships to in-
coming graduate students. Students with outstanding
undergraduate records may be eligible for a number of
university awards. (See Fellowships and Scholarships
undergraduate records may be eligible for under-
hroughout the Graduate School and International Programs
chapter of this catalog.)

THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG
Pharmacists are employed by the pharmaceutical industry, government agencies, armed services, public health services, the Peace Corps, hospitals, scientific publications, drug wholesalers, and as community pharmacists.

KU is a member of the American Association of Colleges of Pharmacy and is accredited by the American Council on Pharmaceutical Education.

KU is a member of the American Association of Colleges of Pharmacy and is accredited by the American Council on Pharmaceutical Education.

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 of a student into the graduate program 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 labo-
Course Work. Students must obtain credit in the following courses or their equivalents:

- P&TX 801 Issues in Scientific Integrity
- P&TX 800 Pharmacology and Toxicology Teaching Principles
- P&TX 799 Pharmacology and Toxicology Seminar
- P&TX 746 Experimental Toxicology
- P&TX 742 Experimental Pharmacology
- P&TX 740 Advanced Biotechnology
- P&TX 735 Advanced Pharmacology II
- P&TX 730 Advanced Pharmacology I
- P&TX 700 Professional Issues in Biomedical Sciences

Students must obtain credit in the following courses or their equivalents:

- P&TX 514 Pathophysiology (3).
- P&TX 601 Biotechnology (3).
- P&TX 625 Pharmacology I (4).
- P&TX 626 Pharmacology II (4).
- P&TX 627 Toxicology (2).
- 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). A course designed to assist doctoral students in the biomedical sciences in their professional development by providing presentations, discussions, and practical experiences related to career planning. Topics include diverse career opportunities and expectations of each, preparation of vitae/resumes and other elements of a successful job search, writing scientific papers and dealing with editors, developing programmatic research programs, balancing professional obligations, advancing through promotions, and related topics. LEC

Ph.D. Degree Requirements

Course Work. Students must obtain credit in the following courses or their equivalents:

- P&TX 700 Professional Issues in Biomedical Sciences
- P&TX 725 Biomedical Bibliography
- P&TX 730 Advanced Pharmacology I
- P&TX 735 Advanced Pharmacology II
- P&TX 740 Advanced Biotechnology
- P&TX 742 Experimental Pharmacology
- P&TX 746 Experimental Toxicology
- P&TX 799 Pharmacology and Toxicology Seminar
- P&TX 800 Pharmacology and Toxicology Teaching Principles
- P&TX 801 Issues in Scientific Integrity

Students also must complete 3 credit hours of advanced graduate work.

A graduate student is accepted into the Ph.D. program after having a commitment from one faculty member to function as the student’s adviser. The adviser secures from two other faculty members agreement to serve on the student’s advisory committee.

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 Graduate School regulations. The dissertation committee normally consists of the original advisory committee of three members, plus two other 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 for such training are computer science; statistical methodology; cellular ultrastructure techniques; histology and cytology; tissue culture methods; isotope techniques; methods in immunology, molecular biology, or protein chemistry; and molecular modeling procedures. Students usually enroll in laboratory classes in the two areas selected.

Comprehensive Examinations. The Ph.D. aspirant takes the comprehensive examination 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.

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 state-of-the-art tissue culture rooms, monoclonal antibody facilities, ultra-centrifuges, flow cytometry, scintillation counters, high-pressure liquid chromatography systems, computer-driven fluorometers and spectrophotometers, photographic equipment and dark rooms, and fully equipped light and fluorescence microscopy systems. Several laboratory groups have more specialized equipment for molecular biology, protein purification and analysis, intracellular ion and pH imaging, immunochemistry, and related techniques. All labs have state-of-the-art computer technology, including hardware and extensive software for imaging, data analysis, data reduction, protein and gene analysis, and statistical tests. Specialized research support facilities include a confocal and an electron microscopy laboratory with both transmission and scanning scopes; a biochemical research laboratory with DNA sequencing, DNA microarrays, peptide synthesis, fermentation, and MALDI-TOF instrumentation; a molecular graphics laboratory with extensive data bases for protein structures; an NMR facility; an X-ray crystallographic laboratory; a mass spectrometry facility; and an instrument design laboratory.
P&TX 710 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 725 Biomedical Bibliography (3). 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. Prerequisite: Graduate standing. LEC

P&TX 730 Advanced Pharmacology I (4). A detailed study of the fundamentals of drug action, drug metabolism, autonomic and cardiovascular pharmacology. The students will attend P&TX 624 lectures, and meet separately with the faculty for additional discussions of more advanced material on these topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

P&TX 735 Advanced Pharmacology II (4). A continuation of P&TX 730. Topics include hormones and related compounds, CNS drugs, chemotherapy of infectious diseases and neoplasia. The students will attend P&TX 655 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 740 Advanced Biotechnology (4). An examination of basic principles of molecular biology, immunology, and protein chemistry as they apply to the identification, productivity, delivery, and monitoring of new therapeutic agents provided by the expanding biotechnology industry. Students will attend lectures in P&TX 601 and meet separately with faculty for additional discussions of more advanced material on these topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in Pharmacology and Toxicology. LAB

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 600 and BIOL 728 or equivalent, or consent of instructor. LEC

P&TX 746 Experimental Toxicology (2). The experimental basis for understanding the fundamental mechanisms involved in the poisoning and detoxification processes will be covered. Topics will include: role of phagocytic cells in organ toxicity, lung, liver, and kidney toxicity. Prerequisite: BIOL 600 and 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, and MDCM 775.) Prerequisite: BIOL 600 or equivalent. LEC

P&TX 799 Pharmacology and Toxicology Seminar (1-3). A review of current literature and research in pharmacology and toxicology. Required of all graduate students in the department every fall and spring semester. 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 physical 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. (Same as MDCM 801, NURO 801, and PHCH 801.) 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. RSH

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 therapeutic (i.e., drug treatment of psychosis, 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. 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. RSH

Takeru Higuchi and Nigel Manning Intersearch Ph.D. Program

Chair: Valentino J. Stella
Simons Laboratories, 2095 Constant Ave., Room 121B
Lawrence, KS 66047-3729, (785) 864-4820
www.hbc.ku.edu/phch/takeru
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, at the same time, 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.
School of Social Welfare

Ann Weick, Dean
Twente Hall, 1545 Lilac Lane, Room 212
Lawrence, KS 66044-3184, (785) 864-4720

Doctor of Philosophy ................................ 361
  Do Your Goals Include .................................... 361
  Then Consider Our Program ........................... 361
The Curriculum ............................................. 361
  Teaching & Research .................................. 361
Ph.D. Admission ............................................ 361
  Qualifications for Admission ........................ 361
  Admission Criteria ................................... 362
  Application Procedure ............................... 362
Ph.D. Degree Requirements ............................ 362
  Doctoral Courses ........................................ 362

Master of Social Work ................................. 362
  M.S.W. Admission ....................................... 362
  Two-year Full-time or Part-time Program .......... 362
  Advanced-standing Criteria ........................ 363
  Application Procedure for All Options ........... 363
  Final Deadlines ....................................... 363
  Planning Your Commitment ............................ 363
M.S.W. Degree Requirements .......................... 363
  Social Work Practice ................................ 363
  Community & Organizational Practice ............ 363
  Social Policy & Program Analysis ................ 363
  Human Behavior in the Social Environment ....... 363
  Social Work Research ................................. 363
  Field Practicum ....................................... 363
  Foundation Courses ................................... 363
  M.S.W. Advanced-level Curriculum ................. 364
  Clinical Social Work Concentration ............... 364
  Social Work Administration Concentration ....... 364
  Field Practicum ....................................... 364
  Alternative Plans ..................................... 365
  Employment-based Practicum ....................... 365
  Prior Work Experience ................................ 365
  Credit for Course Work Taken Outside the School of Social Welfare ........................................ 365

Joint Degree in Social Work & Law .................. 365
School Social Work ...................................... 365
  Testing Out of First-year Courses ................. 366
Intermit & Withdrawal ................................ 366
  Changing from Full-time to Part-time Status ..... 366
  Grading .................................................. 366
Financial Aid ............................................. 366
  Scholarships & Awards ................................ 366
International Students ............................... 366
Social Welfare Courses ............................... 366
School of Social Welfare

Doctor of Philosophy

Challenging ideas and creative thinking are happening at KU’s School of Social Welfare. Our doctoral program is committed to advanced research and scholarship. Our school continues to be a leading innovator in advancing the strengths perspective for social work practice. Doctoral students have played a key role in this exciting initiative.

Do Your Goals Include

- Joining an educational program whose philosophical focus builds on individual, family, and community strengths?
- Conducting research in the communities where clients live?
- Helping to build social work knowledge through all avenues of inquiry?
- Participating in a curriculum that critiques, extends, and revises conventional social work wisdom?
- Contributing to a social work knowledge base that promotes justice and celebrates diversity?

Then Consider Our Program

The Ph.D. program offers effective alternatives for building knowledge and inquiring into social work practice and social welfare policy. We are dedicated to educating scholars who can develop knowledge for the profession through quantitative, qualitative, theoretical, or conceptual analyses, and historiographic investigations. 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.

The Curriculum

Our courses prepare students as scholars with conceptual and methodological sophistication.

- Proseminars focus on the intellectual history and current status of social work ideas and ideologies and on developing a critique and revision of that knowledge.
- In the research sequence, students learn both qualitative and quantitative methodologies, designs and advanced modes of analysis, and how to apply them to situations.
- The policy/practice courses provide the opportunity to analyze policies of interest to students and discover “best” practices as they affect a population. Students critically consider human problems, strengths, and strategies for change and transformation.

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 field instructors. For example, doctoral research assistants work in such fields as aging, child welfare, criminal justice, cultural diversity issues, health and disability, mental health, social policy, and spiritual diversity.

It is part of the school’s mission to focus on teaching, inquiry, and practice that benefit populations who suffer oppression of all kinds. The school is committed to diversity and multicultural perspectives. Many research and service projects are committed to direct and positive impact on people of color, status minorities, and oppressed peoples, individually, collectively, and internationally.

Ph.D. Admission

Qualifications for Admission. To be considered for admission, an applicant must meet these requirements:

1. M.S.W. degree with minimum graduate grade-point average of 3.5 preferred. The admissions committee considers applicants without the M.S.W. who, through their professional activity, have been closely identified with the profession, its practice, and its values and ethics.

2. Completion of the Graduate Record Examination within the past five years. Scores in at least the 50th percentile on two of three test areas are preferred.

3. 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 five years, or plan to complete the course.
4. Two years of social work or related practice; two years of post-master’s professional social work experience is preferred.

5. Ability for doctoral study in social work, demonstrated by a written statement of interests in research relevant to social work practice, letters of recommendation, and a record of scholarly or other professional achievement or both.

6. Demonstrated ability for and interest in advanced scholarship and revision of existing bodies of knowledge.

7. International students: TOEFL examination, completed within the past five years.

8. Other requirements established by the Graduate School.

**Admission Criteria.** Criteria used in judging applications are the applicant’s potential for excellence in academic performance, professional practice experience, and potential for contributions to knowledge-building for social work.

Sources of judgment of these criteria include undergraduate and graduate transcripts; publications, presentations, research proposals, and scholarly works; references concerning professional practice and qualifications for doctoral-level study and research; statement of research and scholarly interests; and information on the applicant’s experience in professional practice.

**Application Procedure.** Complete the Application for Admission to Graduate School and Supplemental Application form. Submit the following supporting application materials:

- Two official copies of all undergraduate and graduate transcripts.
- Graduate Record Examination scores.
- Letters of reference.
- International students must submit TOEFL scores.
- Copies of scholarly work, such as journal articles, papers delivered, research reports, monographs.
- Statement of statistics course taken: title, institution, date of completion, and grade; or plan to complete the course.
- Statement of scholarly and research interests in social work practice.

Application fees are as follows:

- Domestic students applying online ........................................... $45
- Domestic students applying on paper .......................................... $55
- International students applying online ...................................... $55
- International students applying on paper .................................. $60

Applications are not reviewed until all materials are received. The deadline is May 1. See below for financial aid information.

To allow time for consideration for financial assistance through assistantships, applications should be completed by May 1. Late applications are considered only on a space-available basis.

Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to

**The University of Kansas Graduate School Graduate Applications**

1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

**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, and the dissertation. To fulfill elective hours, students may take graduate-level courses in any substantive area or research technique necessary for successful completion of their goals in the doctoral program. Students can meet this requirement by taking electives in social science or other relevant disciplines in the Graduate School. Before students are certified as eligible to proceed to candidate status, they must complete course requirements and a comprehensive examination process.

Required course work can be completed in two years. Additional time is needed to complete the comprehensive examination process and dissertation. Students may start on a part-time basis but eventually must spend one year in residence. This entails two semesters of full-time course work (9 hours) and may include one summer session (6 hours) or a combination of course work and appointment as a teaching or research assistant.

The degree of Doctor of Philosophy in social work is granted by the Graduate School of the University of Kansas.

**Doctoral Courses** (54 credit hours)

- SW 979 Methods of Naturalistic and Qualitative Research .................. 3
- SW 980 Proseminar ........................................................................ 3
- SW 981 Advanced Research Methods I ............................................ 3
- SW 982 Social Policy Analysis ......................................................... 3
- SW 983 Advanced Research Methods II ........................................... 3
- SW 984 Social Work Practice .......................................................... 3
- SW 985 Advanced Proseminar .......................................................... 3
- SW 986 Research Practicum ............................................................. 3
- Substantive electives ..................................................................... 12
- SW 999 Dissertation ...................................................................... 18

**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 administration 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, school social work) or social work administration. 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 records in their foundation programs. 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 and evening 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 M.S.W. course work. Degrees must include liberal arts course work—skill in commu-
nication, understanding of ways in which knowledge is gained and applied, knowledge of social, biological, and behavioral sciences, history, and an understanding of values among differing cultures.

**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. Higher grade point averages are an advantage. If you have less than two years of post-B.S.W. social work experience, a copy of your practicum evaluation is required, and one of your three references must be from your practice class instructor. If you have two or more years of experience in the social work field, a reference from your social work supervisor should be submitted. The amount and type of applicant’s social service experience are factors in admission decisions. Admission to the Advanced-standing program is on a full-time basis only. Under special limited circumstances, a part-time program may be considered, providing the plan meets the educational mission of the school and has been approved by the associate dean for academic programs. To be considered for Advanced Standing, current seniors should submit transcripts that document their fall semester grades and successful practicum experience.

**Application Procedure for All Options.** A minimum undergraduate grade-point average of 3.0 on a 4-point scale is expected. The admissions committee may make exceptions, taking 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. Applicants are evaluated on undergraduate grade-point average, 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. The applicant is responsible for gathering the following supporting materials and submitting them in one envelope; the School of Social Welfare application form, the applicant’s narrative statement, one copy of student-issued transcripts from all previously attended schools regardless of degree status, three letters of reference on forms provided, and a $25 nonrefundable application fee. Please observe the specific instructions provided in application packets and on our Web site.

At the time of this printing, we do not accept electronic applications. Applications are reviewed beginning in October. Admission decisions are made in the spring of each year. Advanced-standing 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 submitting applications by December 1, the application fee is waived. To ensure your privacy, we are unable to provide admission decisions over the telephone. All applicants will be notified in writing. All application materials become the property of KU.

**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 3 to 6 credit hours each semester their first year. Full-time students enroll in 16 credit hours each semester. Currently, the M.S.W. Program is a weekday program with late-afternoon and evening courses 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-point grading system.*
- Twenty-eight credit hours of field practicum with an S grade for satisfactory performance.
- Recommendation of the faculty of the School of Social Welfare to the chancellor 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). Gives students an understanding of the core elements of practice in organizations and communities.

**Social Policy and Program Analysis** (SW 720). 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). 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 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):

<table>
<thead>
<tr>
<th>Semester 1 (16 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 701 Basic Field Practicum</td>
<td>7</td>
</tr>
<tr>
<td>SW 710 Social Work Practice I</td>
<td>3</td>
</tr>
<tr>
<td>SW 713 Community and Organizational Practice</td>
<td>3</td>
</tr>
<tr>
<td>SW 720 Social Policy and Program Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2 (16 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 701 Basic Field Practicum</td>
<td>7</td>
</tr>
<tr>
<td>SW 711 Social Work Practice II</td>
<td>3</td>
</tr>
</tbody>
</table>
M.S.W. Advanced-level Curriculum

Students at the advanced level select a concentration in either clinical social work practice or social work administration in accordance with their goals of either working directly with individuals, families, and groups or at the macro-level of practice in social program design and administration. Students may not enroll in advanced-level classes before completing foundation requirements.

Clinical Social Work Concentration (32 credit hours). The clinical social work concentration prepares students for social work practice with individuals, families, and small groups. The focus is on selecting and evaluating interventions based on needs in each situation, whether personal, interpersonal, or environmental. Social work theory and methods taught are applicable to the variety of practice settings in which clinical services are provided, as reflected in the list of practicum settings at the end of this catalog. Students expecting to sit for the Licensed Specialist Clinical Social Worker examination two years after the M.S.W. should take 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 850 Social Work in Child and Family Settings, SW 852 Social Work in Health Care and Mental Health Settings, SW 853 Social Work and Aging, and SW 854 Social Work in Schools.

- 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 804 Advanced Field Practicum: Social Work Administration .................................................. 7
- SW 842 Assessing and Managing Outcomes ................................................. 3
- SW 843 Personnel Management, Team Building, and Workplace Diversity ........................................... 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 practicum 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 involving the office, the student, and the community agency. The office arranges all placements and is responsible for ensuring that they provide appropriate learning opportunities for students and that qualified field instructors are available.

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, in 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 the 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 field 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 learning objectives of either the clinical or social work administration concentrations. Clinical concentration practica are linked to integrative seminars in the following fields of practice: children and families, health/mental health, aging, or school social work.

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 Practicum 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 client service and learning, the maximum time for a break between semesters in practicum is three weeks, regardless of time allowable according to the university calendar. **Alternative Plans.** When a student's current employment includes appropriate practice opportunities, but the student is not interested in applying for an Employment-based Practicum (see below), the practicum may be postponed by approval of the associate dean for academic programs until other courses at that level have been completed. The student must submit a practicum exception form to the director of practicum, who makes a recommendation to the associate dean. Following the completion of course work, a practicum may be completed either in a two-to-three-day, two-semester plan or a block plan, four to five days a week over a shorter time than two semesters. Enrollment and fees for practicum are required during the time the student is in the field practicum. All practicum placements require that students be available for a minimum of eight hours per week in a setting during weekday hours, with more time required depending on the learning needs of the students and program needs of the agency. Practicum placements that provide any night and weekend hours are extremely limited.

**Employment-based Practicum.** An Employment-based Practicum (EBP) allows students to use their places of employment as sites for field practicum. Students may **apply for an EBP** if they meet these criteria:

- 1. The student is working in a human service agency that can provide educational opportunities for the student to acquire the knowledge and skills necessary for advancement to the next level of practice.
- 2. These educational opportunities can be specified and are clearly distinguished from the student’s employment responsibilities.
- 3. The agency is supportive of the student’s educational objectives and provides support for the student. For example, this support may be shown through providing the student with released time for course and field instruction or reassignment of the student to a different position in the agency that will provide the needed educational opportunities.
- 4. A qualified field instructor, who is not the student’s employment supervisor, is available to supervise the student.

An Employment-based Practicum is not an avenue for students to get educational credit for the work they do in their places of employment, a way for employers to get more hours of work out of an employee they value through adding the practicum on to a full time job, or a special practicum. Although the setting for an EBP may be different from a traditional practicum, all of the expectations for field practicum specified by the School of Social Welfare are still requirements for an Employment-based Practicum.

Employment-based Practicum application forms and guidelines are available from the practicum office. To be considered, the completed EBP application must be submitted to the practicum office by the deadline dates listed on the application.

**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 the 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 administration students interested in taking a course offered outside the program must consult the chair of the social work administration committee. Credit for continuing education institutes and workshops or programs conducted by nonaccredited or nondegree-granting organizations are not accepted.

Students who request transfer from other programs accredited by the Council of Social Work Education must go through the admission process and provide transcripts, descriptions of field practicum content, written evaluations of field practicum performance, and the number of practicum clock hours.

Students who request transfer from nonaccredited programs are expected to test out of some required foundation courses. Applications for transfer must be received by January 15.

**Joint Degree in Social Work and Law**

The M.S.W./J.D. program combines into four years the two-year M.S.W. program offered by the School of Social Welfare and the three-year J.D. program offered by the School of Law. The program offers a thorough academic grounding in both areas. Contact each school for separate admission information. The Law School Admissions Test is required for admission to the law school. Applicants must apply to and meet the criteria for admission to both schools.

**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 certified school social worker.
- Clinical social work concentration.
- Integrative seminar in school social work: SW 834 Social Work in Schools.
- SPED 725 is highly recommended as an elective choice for students planning a future in school social work.
Testing Out of First-year Courses

Students who believe they have already mastered the content of SW 720, SW 730 or SW 740 may attempt to test out of the course at a designated time at the beginning of the semester in which the course is offered. To test out, students take the equivalent of a final examination for the course. Up to 6 credit hours may be waived for testing out successfully. A student may attempt to test out of a course only once.

Intermit and Withdrawal

Students in good academic standing may apply to intermit (not take courses) after completion of at least one semester, for a period of one year without the necessity of readmission. Application for intermit status must be submitted to the associate dean of academic programs for approval and must include a statement of support from the student’s academic adviser. Students granted intermit status must verify in writing their intention to return by February 1 for the fall semester or by September 1 for the spring semester.

Any student who is considering intermit status or withdrawal must consult with his or her adviser. An exit statement must be submitted for the record, indicating the reason for intermit or withdrawal.

Changing from Full-time to Part-time Status.

Full-time students who drop any class during the foundation year also must drop SW 701 Basic Field Practicum and SW 710/SW 711 Social Work Practice I and II.

Grading

The basic system for M.S.W. courses is an A, B, C, F system, in which A represents exceptional performance, B represents graduate standards, C represents below graduate standards, and F represents failure, unsatisfactory work with no credit granted toward a degree. Plus/minus grades may be given and are calculated in the overall grade-point average.

No course may be retaken to improve a grade.

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 66045-7535, (785) 864-4700, osfa@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 the University of Kansas. The FAFSA is available online at www.fafsa.ed.gov. Start the process early, be complete by February 1 for the fall semester or by September 1 for the spring semester.

For information about additional programs contact the Office of Student Financial Aid.

Scholarships and Awards

Scholarships are awarded to advanced-level M.S.W. students from the following funds established with the Kansas University Endowment Association:

- Aase George Scholarships
- Cecilia Robinson Scholarship
- Dot Simmons and Dodie Abbot Scholarship
- Esther Twente Scholarships
- Helen West and Rebecca West Norris Memorial Fund
- Mildred Webb Sigler Scholarship in Health Care
- Pauline Flynn Scholarship in Child Welfare
- School of Social Welfare Advisory Board Scholarships
- William and Beverly Harper Scholarship

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 for underrepresented ethnic groups. Students must be in good academic standing. The FAFSA must be filed as part of the application process. Please contact the school for more information.

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. The need to take English courses may delay your start in the M.S.W. program. See Minimum English Requirements under Admission in the General Information chapter of this catalog for further information.

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. All students work under the supervision of a qualified field instructor where 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 701 and SW 711. LEC

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 generic social work based on a strengths perspective and a person-in-environment framework of reference. Course taken concurrently with SW 701 which provides students an opportunity to integrate theory and practice in work with clients.

Content is structured to prepare students to enter the advanced level of the M.S.W. program. Course taken concurrent with SW 710. Prerequisite: SW 711. 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. 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/program responses. Economical and social injustice policies are exemplars for understanding societal dynamics and evaluating related policies. Emphasis is given to the development of conceptual skills in identifying and analyzing needs addressed by programs and policies. LEC

SW 730 Human Behavior in the Social Environment (3).

Course provides foundation knowledge about bio-psycho-social aspects of individual and family behavior. Theoretical perspectives on well being, dysfunction, and developmental processes are analyzed critically.
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 course covers 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

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,etc. LEC

SW 801 Advanced Field Practicum-Clinical Practice (3.5-14). 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. FLD

SW 804 Advanced Field Practicum-Social Work Administration (3.5-14). Students are assigned to social service agencies that provide 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. FLD

SW 830 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. Prerequisite: Completion of SW 810. LEC

SW 831 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 need for 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 work force. Topics offered may include strengths-oriented, solution-focused brief therapy; narrative therapy; ego-psychotherapy from a strengths perspective; social work practice and families. Prerequisite: Completion of SW 810. LEC

SW 832 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 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 Designing Social Work Programs (3). Introduction to client centered human service management, including the variety of tasks, roles, and functions of managers. Majority of the course is devoted to design and analysis of 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, other administrative functions. Prerequisite: Completion of all foundation requirements. LEC

SW 842 Assessing and Managing Client Outcomes (3). Emphasis is on the use of information to improve human service program performance. Includes content for the design, implementation, and evaluation of information systems. Prerequisite: Completion of all foundation requirements. LEC

SW 843 Personnel Management, Team Building, and Workplace Diversity (3). Builds knowledge and skills in effective supervision and human resource management with emphasis on maximizing client and community well-being by increasing job satisfaction, enhancing staff morale, and creating and maintaining a culture that reflect, contribute to, and celebrate diversity in the larger community. Prerequisite: 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 interprofessional strategies to implement changes. LEC

SW 845 Seminar in Client-Centered Leadership and Management (3). The purpose is to bring together knowledge and practical experiences of students in the final stage of their preparation of practice as client-centered administrators and supervisors. The class is devoted to the study of leadership, innovation, change and the development of skills in these areas. Some emphasis will be devoted to making structural changes to enhance the well-being of clients. Prerequisite: Completion of all foundation requirements. LEC

SW 846 Advanced Community and Social 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. The course will help students know and further develop their analytical and empirical skills needed to effectively manage and advocate with and on behalf of different human service communities. Throughout the course, skill-based exercises are presented to aid in understanding theoretical concepts. 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 849 Financial Management (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 852 Social Work with Groups (3). Theory and practice of social work with the wide range of groups in which social workers participate as workers and co-workers. Focus on the social worker’s tasks and behaviors in establishing group services and in facilitating work in the group from the time of its formation to its termination as a service entity. Prerequisite: Completion of foundation requirements. LEC

SW 855 Studies: (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 dying and grieving. Course includes exploration of assessment and interventions that enable individuals and their families to cope with loss. Prerequisite: Completion of all foundation requirements. LEC

SW 861 Family Mediation (3). This course is designed to provide education in both theory and skills to prepare the student to intervene as a neutral in family disputes. This is, in effect, a practice course which serves to introduce students to the breadth and depth of family mediation. The student will study written materials and lecture presentations, as well as practice using mediator skills within role-plays. 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 concerning etiology, classification, assessment, and treatment of distress and mental disorders. Emphasis will be on the dynamic approaches to problems that frequently confront women. Prerequisite: Completion of all foundation requirements. LEC

SW 875 Readings and Investigations: Special. (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 Male Clients (3). This course is intended to help students improve their clinical practice skills with male clients. Topics covered include gender differences in communication styles, males as children and teenagers, and “men’s movement”, fatherhood, similarities and differences across races and cultures, homosexual males, men who batter, and females as workers with male clients. Prerequisite: Completion of all foundation requirements. LEC

SW 878 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 879 Human Sexuality (3). Seminar to provide knowledge base about role sexuality plays in the human experience, typical sexual problems with both etiology and possible solutions studied, an understanding of alternative methods of sexual expression, and an exploration of personal feelings of sexuality. Prerequisite: Completion of all foundation requirements. LEC

SW 890 Current Issues in Professional Social Work Education: (0-3). Course provides opportunities for interactive course 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 955 Doctoral Studies: _____ (1-3). This course provides the opportunity for exploration of innovative content under the guidance of Ph.D. faculty. LEC

SW 979 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, text and content analysis, the use of archival data, and unobtrusive behavioral observation. LEC

SW 980 Proseminar (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 Advanced Proseminar (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 Proposal (1-3). Individual research preparatory to defense of dissertation prospectus. (By arrangement with doctoral chair.) RSH

SW 999 Dissertation (1-12). RSH
Programs and departments whose names follow that of the institution in which the highest degree was earned are those in which the person holds Graduate Faculty membership and do not necessarily reflect the programs or departments in which university appointment is held. The faculty lists in this catalog reflect the status of the members as of January 1, 2003.

Lauren S. Aaronson. Professor, Associate Dean, Research, School of Nursing, Ph.D., Washington. Nursing.
Dale Abrahamson. Professor, Chair, Dept. of Anatomy & Cell Biology, Ph.D., Virginia. Anatomy & Cell Biology.
Glenn Adams. Assistant Professor, Ph.D., Stanford. Psychology.
Arvin Agah. Associate Professor, Ph.D., Southern California. Electrical Engineering & Computer Science.
Jasit Singh Ahluwalia. Associate Professor, Chair, Dept. of Preventive Medicine & Public Health, M.D., Tulane. Preventive Medicine & Public Health.
Rohini Ahluwalia. Associate Professor, Ph.D., Ohio State. Business.
Omofolabo Ajayi. Associate Professor, Ph.D., Nigeria. Theatre & Film.
Cynthia Akagi. Assistant Professor, Ph.D., Kansas State. Health, Sport, & Exercise Sciences.
Sandra L. Albrecht. Associate Professor, Ph.D., Texas. Sociology.
Jane Aldrich. Professor, Ph.D., Michigan. Medical Chemistry.
David E. Alexander. Assistant Professor, Ph.D., Indiana. Ecology & Evolutionary Biology, Molecular Biosciences.
W. Perry Alexander. Associate Professor, Ph.D., Kansas. Electrical Engineering & Computer Science.
Christopher Allen. Associate Professor, Ph.D., Kansas. Electrical Engineering & Computer Science.
David Ambler. Courtesy Associate Professor, Vice Chancellor for Student Affairs, Ed.D., Indiana. Psychology & Research in Education.
Christopher Anderson. Associate Professor, Ph.D., Pittsburgh. Business.
Danny Anderson. Professor, Chair, Dept. of Spanish & Portuguese, Ph.D., Kansas. Spanish & Portuguese.
Robert J. Antonio. Chancellor’s Club Teaching Professor, Ph.D., Notre Dame. Sociology.
Elissa Armstrong. Assistant Professor, M.F.A., Alfred. Design.
Thomas P. Armstrong. Professor, Ph.D., Iowa. Physics & Astronomy.
Margaret J. Arnold. Associate Professor, Ph.D., Texas. English.
Wilfred N. Arnold. Professor, Ph.D., Cornell. Biochemistry & Molecular Biology.
William R. Arnold. Associate Professor, Ph.D., Chicago. Sociology.
Ronald A. Ash. Professor, Ph.D., South Florida. Business.
Elizabeth Asiedu. Assistant Professor, Ph.D., Illinois. Economics.
Paul Atchley. Associate Professor, Ph.D., California (Riverside). Psychology.
Ruth Atchley. Assistant Professor, Ph.D., California (Riverside). Psychology.
G. Douglas Atkins. Professor, Ph.D., Virginia. English.
Barbara Atkinson. Professor, Executive Dean, School of Medicine, Vice Chancellor for Clinical Affairs, M.D., Thomas Jefferson Univ. Pathology & Laboratory Medicine.
Gregory Ator. Associate Professor, M.D., Baylor. Hearing & Speech.
Jeffrey Aubé. Professor, Ph.D., Duke. Medicinal Chemistry.
Kenneth Audus. Professor, Chair, Dept. of Pharmaceutical Chemistry, Ph.D., Kansas. Pharmaceutical Chemistry.
Ronald Aust. Associate Professor, Ph.D., Washington. Teaching & Leadership.
Bruce Baker. Associate Professor, Ed.D., Columbia. Teaching & Leadership.
Mary Banwart. Assistant Professor, Ph.D., Oklahoma. Communication Studies.
Philip S. Baringer. Professor, Ph.D., Indiana. Physics & Astronomy.
Vincent Barker III. Associate Professor, Ph.D., Illinois (Urbana). Business.
Carnegie Mellon Univ. Economics.
Frank Baron. Professor, Ph.D., California (Berkeley). Germanic Languages & Literatures.
Philippe Barrière. Associate Professor, Ph.D., Sorbonne. Architecture.
Arlene Barry. Associate Professor, Ph.D., Wisconsin. Teaching & Leadership.
Mikhail Barybin. Assistant Professor, Ph.D., Minnesota. Chemistry.
C. Daniel Batson. Professor, Ph.D., Princeton. Psychology.
Lorraine Bayard de Volo. Assistant Professor, Ph.D., Michigan. Political Science.
Margaret Bayer. Professor, Ph.D., Cornell. Mathematics.
Nancy Baym. Associate Professor, Ph.D., Illinois (Urbana). Communication Studies.
Barry Baysinger. Professor, Ph.D., Virginia Polytechnic Inst. & State Univ. Business.
David L. Beedles. Professor, Ph.D., Texas. Business.
Thomas D. Beisecker. Associate Professor, Chair, Dept. of Design, Ph.D., Wisconsin. Communication Studies.
Stephen Benedict. Associate Professor, Chair, Genetics Program, Ph.D., Vanderbilt. Molecular Biosciences.
Timothy A. Bengtson. Clyde & Betty Reed Teaching Professor, Ph.D., Northwestern. Journalism.
David Benson. Professor, Ph.D., California (Los Angeles). Chemistry.
Charles M. Berg. Professor, Ph.D., Iowa. Theatre & Film.
Elizabeth Bergquist. Assistant Professor, Ph.D., Iowa. Nursing.
Nancy E.J. Berman. Professor, Ph.D., Massachusetts Inst. of Technology. Anatomy & Cell Biology.
Daniel Bernstein. Professor, Ph.D., California (San Diego). Psychology.
Cindy Bierie. Assistant Professor, Ph.D., California (Berkeley). Chemistry.
Marianne Berry. Professor, Ph.D., California. Social Welfare.
THE UNIVERSITY OF KANSAS • 2003-05 GRADUATE SCHOOL CATALOG

Graduate Faculty

David Besson. Professor, Ph.D., Rutgers. Physics & Astronomy.
Peter L. Beyer. Associate Professor, M.S., Missouri. Dietetics & Nutrition.
Surendra Bhana. Professor, Ph.D., Kansas. History.
Gautam Bhattacharyya. Associate Professor, Ph.D., Rochester. Economics.
Monica Biemat. Professor, Ph.D., Michigan. Psychology.
Melissa Birch. Associate Professor, Ph.D., Illinois. Business.
George Bittlingmayer. Wagnon Distinguished Professor, Ph.D., Chicago. Business.
Alan Black. Professor, Ph.D., Cornell. Urban Planning.
Ross Black. Associate Professor, Ph.D., Wyoming. Geology.
Phillip Blackhurst. Associate Professor, M.A., San Francisco State. Art.
Brian Blagg. Assistant Professor, Ph.D., Utah. Medicinal Chemistry.
Michael Bleich. Associate Professor, Ph.D., Nebraska (Lincoln). Nursing.
Debra Blumenthal. Assistant Professor, Ph.D., Toronto. History.
Sherry A. Borgers. Professor, Ed.D., Houston. Psychology & Research in Education.
David G. Bom. Professor, Ph.D., Ohio State. Human Development & Family Life.
Andrew Borovik. Professor, Ph.D., North Carolina. Chemistry.
Gail Bosser. Associate Professor, Ph.D., Michigan. History.
John B. Boulton. Professor, Ph.D., Kansas. Music & Dance.
Ruth Bowman. Assistant Professor, M.F.A., Kansas. Design.
Kristin Bowman-James. Professor, Chair, Dept. of Chemistry, Ph.D., Temple. Chemistry.
Beverly M. Boyd. Professor, Ph.D., Columbia. English.
Diane Boyle. Associate Professor, Ph.D., Kansas. Nursing.
David A. Braaten. Associate Professor, Ph.D., California (Davis). Physics & Astronomy.
Karen Braman. Clinical Assistant Professor, M.S., Kansas. Pharmacy Practice.
Nyla R. Branscum. Professor, Ph.D., Purdue. Psychology.
John J. Bricke. Professor, Ph.D., Edinburgh. Philosophy.
Barbara Bridges. Associate Professor, Ed.D., Kansas. Nursing.
Ann Brill. Associate Professor, Ph.D., Minnesota. Journalism.
John Breholm. Associate Professor, Graduate Director, School of Journalism & Mass Communications, M.A., Missouri. Journalism.
Karl Brooks. Assistant Professor, Ph.D., Kansas. History.
Edward Brown. Assistant Professor, Ph.D., Missouri (Kansas City). Nurse Anesthesia.
Frank M. Brown. Associate Professor, Ph.D., Edinburgh. Electrical Engineering & Computer Science.
Monica Brown. Assistant Professor, Ph.D., Nevada (Las Vegas). Special Education.
Robert D. Brown. Professor, Ph.D., California (Berkeley). Mathematics.
JoAnn Browning. Assistant Professor, Ph.D., Purdue. Civil, Environmental, & Architectural Engineering.
Emst S. Con Brunn. Assistant Professor, Ph.D., Bochum. Medicinal Chemistry.
Matthew Ebecker. Associate Professor, Ph.D., Wisconsin. Molecular Biosciences.
Clarence S. Buller. Professor, Chair, Dept. of Molecular Biosciences, Ph.D., Kansas. Molecular Biosciences.
Ruben D. Bunag. Professor, M.D., Univ. of the Philippines. Pharmacology, Toxicology, & Therapeutics.
Louis C. Burmeister. Professor, Ph.D., Purdue. Mechanical Engineering.
Daryle H. Busch. Roy A. Roberts Distinguished Professor, Ph.D., Illinois. Chemistry.
John H. Bushman. Professor, Ph.D., Illinois. Teaching & Leadership.
Michael A. Bushousa. Associate Professor, Ph.D., Illinois. English.
Ralph Byers. Professor, Ph.D., Cornell. Mathematics.
Cheryl Cahill. Associate Professor, Ph.D., Michigan. Nursing.
Kyle Camarda. Assistant Professor, Ph.D., Illinois. Chemical & Petroleum Engineering.
Byron Caminerio-Santangelo. Associate Professor, Ph.D., California (Irvine). English.
Marta Caminerio-Santangelo. Associate Professor, Ph.D., California (Irvine). English.
Leilon R. Capps. Professor, Ph.D., Minnesota. Teaching & Leadership.
Diana Carlin. Professor, Dean, Graduate School and International Programs, Ph.D., Nebraska. Communication Studies.
Gerald Carlson. Professor, Chair, Dept. of Biochemistry & Molecular Biology, Ph.D., Iowa State Univ. Biochemistry & Molecular Biology.
Maria Carlson. Professor, Ph.D., Indiana. Slavic Languages & Literatures.
Robert G. Carlson. Professor, Ph.D., Massachusetts Inst. of Technology. Chemistry.
James B. Carothers. Professor, Interim Associate Provost, Ph.D., Virginia. English.
Mary A. Carpenter. Associate Professor, Ph.D., Iowa. Hearing & Speech.
William Carwell. Associate Professor, Associate Dean, School of Architecture & Urban Design, Director, Architecture program, D.Arch., Queen’s Univ. of Belfast. Architecture.
Peter J. Casagrande. Professor, Ph.D., Indiana. English.
David Catelino. Associate Professor, Ph.D., Stanford. History of Art.
Jerry D. Chaffin. Professor, Ed.D., Kansas. Special Education.
Swan Chakkabarti. Associate Professor, Ph.D., Nebraska. Electrical Engineering & Computer Science.
Bala Chandran. Professor, Ph.D., Indiana. Microbiology. Molecular Genetics, & Immunology.
Rosemary Chang. Professor, Ph.D., Minnesota. Social Welfare.
Wayne Chapin. Assistant Professor, M.S., Kansas State. Engineering Management.
John Charnes. Associate Professor, Ph.D., Minnesota. Business.
Keith W. Chauvin. Associate Professor, Associate Dean, Academic Affairs, School of Business, Ph.D., Illinois (Urbana). Business.
Paul D. Cheney. Professor, Chair, Dept. of Molecular & Integrative Physiology, Ph.D., State Univ. of New York (Upstate Medical Center). Molecular & Integrative Physiology.
Michael D. Chemiss. Professor, Ph.D., California (Berkeley). English.
Mark Chertoff. Associate Professor, Ph.D., Wisconsin. Hearing & Speech.
Masa Hiro Chiga. Professor, M.D., Tokyo. Pathology & Laboratory Medicine.
Margaret Childs. Associate Professor, Ph.D., Pennsylvania. East Asian Languages & Cultures.
Simon Childs. Assistant Professor, Ph.D., South Carolina. Preventive Medicine & Public Health.
Dennis Christoffer. Associate Professor, Ph.D., Kansas. Theatre & Film.
Edward R. Christopherson. Courtesy Assistant Professor, Ph.D., Kansas. Human Development & Family Life.
James D. Church. Associate Professor, Ph.D., Nebraska. Mathematics.
Allan J. Cigler. Chancellors Club Teaching Professor, Ph.D., Indiana. Political Science.
Alicia Clark. Professor, Ph.D., Kansas. Music & Dance.
Katherine Clark. Assistant Professor, Ph.D., Johns Hopkins. History.
Gary M. Clark. Professor, Ed.D., George Peabody. Special Education.
Walter Clark. Professor, Ph.D., California (Los Angeles). Music & Dance.
Rita Clifford. Associate Professor, Associate Dean, School of Nursing, Ph.D., Kansas. Nursing.
Edith Cloesw. Professor, Ph.D., Yale. Slavic Languages & Literatures.
E. Benton Cobb. Associate Professor, Ph.D., Nebraska. Mathematics.
Robert Cohen. Associate Professor, Ph.D., Southern California. Molecular Biosciences.
John Colombo. Professor, Ph.D., State Univ. of New York (Buffalo). Psychology.
Cynthia Colwell. Assistant Professor, Ph.D., Louisiana State. Music & Dance.
William Comer. Associate Professor, Ph.D., California (Berkeley). Slavic Languages & Literatures.
Paul M. Connelly. Associate Professor, Ph.D., Purdue. Economics.
Helen Connors. Professor, Ph.D., Kansas. Nursing.
Joseph L. Conrad. Professor, Ph.D., Texas. Slavic Languages & Literatures.
Kathryn Conrad. Associate Professor, Ph.D., Pennsylvania. English.
Anthony Corbelli. Associate Professor, Ph.D., California (Berkeley). Classics.

Victoria Corbin. Associate Professor, Ph.D., Harvard. Molecular Biosciences.

Sally Cornelison. Assistant Professor, Ph.D., Courtland Inst. of Art. History of Art.

Luis Corteguera. Associate Professor, Ph.D., Princeton. History.

Jose Sequeira Costa. Cordelia B. Murphy Distinguished Professor of Piano, Lisbon Conservatory. Music & Dance.

Christian Crandall. Associate Professor, Ph.D., Michigan. Psychology.


George J. Crawford. Associate Professor, Ph.D., Ohio State. Teaching & Leadership.


Shannon Criss. Associate Professor, Ph.D., Harvard. Architecture.

Ann E. Cudd. Professor, Chair, Women’s Studies Program, Ph.D., Pittsburgh. Philosophy.

David R. Cue. Assistant Professor, Ph.D., Iowa. Microbiology, Molecular Genetics, & Immunology.

Mark Cunningham. Assistant Professor, M.D., Minnesota. Pathology & Laboratory Medicine.

Cameron Currie. Assistant Professor, Ph.D., Toronto. Ecology & Evolutionary Biology.


Ivan Damjanov. Professor, M.D., Zagreb. Pathology & Laboratory Medicine.

Paul D’Anieri. Associate Professor, Chair, Russian & East European Studies Program, Ph.D., Cornell. Political Science.

Lauren Darling. Assistant Professor, Ph.D., Kentucky. Pathology & Laboratory Medicine.

David Darwin. Deane A. Ackers Distinguished Professor, Ph.D., Illinois. Civil, Environmental, & Architectural Engineering.

Mary Davidson. Assistant Professor, Ph.D., Toronto. English.


James Daugherty. Associate Professor, Ph.D., Florida State. Music & Dance.


Raymond G. Davis. Associate Professor, Ph.D., California (Davis). Political Science.


Bartholomew Dean. Assistant Professor, Ph.D., Harvard. Anthropology.

Andrew P. Debicki. University Distinguished Professor, Ph.D., Yale. Spanish & Portuguese.

Gerritt deBoer. Associate Professor, Ph.D., Maryland (Baltimore). Ecology & Evolutionary Biology.

Charles J. Decede. Courtesy Professor, Ph.D., Louisiana State. Molecular Biosciences.

Richard T. De George. University Distinguished Professor, Ph.D., Yale. Philosophy, Russian & East European Studies.

Leisha Dehart-Davis. Assistant Professor, Ph.D., Georgia Inst. of Technology. Public Administration.

Robert K. DeKosky. Associate Professor, Ph.D., Wisconsin. History.

Robert C. De Lisle. Associate Professor, Ph.D., Case Western Reserve. Anatomy & Cell Biology.

Kenneth Demarest. Professor, Ph.D., Ohio State. Electrical Engineering & Computer Science.

Michael Dennis. Assistant Professor, Ph.D., Purdue. Communication Studies.


Frank deNoyelles. Professor, Ph.D., Cornell. Ecology & Evolutionary Biology.


Donald D. Deshler. Professor, Ph.D., Arizona. Special Education.

Amy J. Devitt. Esther Conger Gabel & M. Wren Gabel Teaching Professor, Ph.D., Michigan. English.

John Devlin. Assistant Professor, Ph.D., Waterloo. Geology.

René Diaz. Professor, M.S., Columbia. Architecture.

Leslie Diens. Professor, Ph.D., Chicago. Geography, Russian & East European Studies.

Walter Dimmick. Associate Professor, Ph.D., Southern Illinois. Ecology & Evolutionary Biology.

Richard W. Dishing. Associate Professor, M.A., New Mexico. Art.

S. Edwards Dismuke. Kansas Health Foundation Distinguished Professor, Dean, School of Medicine—Wichita, M.D., Pennsylvania. Preventive Medicine & Public Health.

Rick Dobrowsky. Associate Professor, Ph.D., North Carolina State. Pharmacology & Toxicology.


Brian Donovan. Assistant Professor, Ph.D., Northwestern. Sociology.

Patrick Dooley. Associate Professor, M.F.A., Iowa. Design.
Graduate Faculty

John Ferraro. Carolyn Doughty—Margaret Kemp Professor, Chair, Dept. of Hearing & Speech, Ph.D., Denver. Hearing & Speech.
Marc E. Fey. Professor, Ph.D., Purdue. Child Language, Hearing & Speech.
Jack Finchem. Dean, School of Pharmacy, Ph.D., Minnesota. Pharmacy Practice.
Michael Finger. Associate Professor, Ph.D., Minnesota. Psychology.
James L. Fishback. Associate Professor, M.D., Kansas. Pathology & Laboratory Medicine.
Kenneth Fischer. Assistant Professor, Ph.D., Stanford. Mechanical Engineering.
Mark Fisher. Associate Professor, Ph.D., Illinois. Biochemistry & Molecular Biology.
A. Max Fiaskin. Professor, Ph.D., Johns Hopkins. Microbiology, Molecular Genetics, & Immunology.
Barry Fitzgerald. Associate Professor, M.F.A., Buffalo. Design.
Donald Fox. Thomas M. Bowls Distinguished Professor, Director, Indigenous Nations Studies Program, Ph.D., Oklahoma. History.
William G. Fleissner. Professor, Ph.D., California (Berkeley). Mathematics.
Erik Floor. Associate Professor, Ph.D., California (Davis). Molecular Biociences.
Sarah Ann Forrest. Associate Professor, Ph.D., Kansas. Nursing.
Ivan Fortushniak. Assistant Professor, M.F.A., Univ. of Cincinnati. Art.
Bryan Foster. Assistant Professor, Ph.D., Michigan State. Ecology & Evolutionary Biology.
Diane R. Fourny. Associate Professor, Chair, European Studies Program, Ph.D., Stanford. French & Italian.
Doreen Fowler. Associate Professor, Ph.D., Brown. English.
Sherry Fowler. Assistant Professor, Ph.D., Stanford. History of Art.
Stephen Fowler. Professor, Ph.D., Princeton. Human Development & Family Life, Pharmacology & Toxicology.
Michael Fox. Associate Professor, Sc.D., Johns Hopkins. Health Policy & Management.
Ronald A. Francisco. Professor, Ph.D., Illinois. Political Science.
Patrick Frank. Assistant Professor, Ph.D., George Washington. History of Art.
David W. Frayer. Professor, Ph.D., Michigan. Anthropology.
Linda Frazier. Associate Professor, M.D., Mt. Sinai. Preventive Medicine & Public Health.
Doren Frederickson. Associate Professor, M.D., Kansas. Preventive Medicine & Public Health.
H. George Frederickson. Edwin O. Steine Distinguished Professor, Ph.D., Southern California. Political Science.
Bryant C. Freeram. Professor, Ph.D., Yale. French & Italian.
Bruce Frey. Assistant Professor, Ph.D., Kansas. Psychology & Research in Education.
Paul Friedman. Associate Professor, Ph.D., Pennsylvania State. Communication Studies.
Benjamin S. Friesen. Professor, Ph.D., Iowa State. Molecular Sciences, Genetics.
Elizabeth Frits. Assistant Professor, Ph.D., Wichita State. Mechanical Engineering.
William Fuerst. Professor, Dean, School of Business, Ph.D., Texas Tech. Business.
Seryle Gallant. Associate Professor, Ph.D., Connecticut. Psychology.
Fred Galvin. Professor, Ph.D., Minnesota. Mathematics.
Truman Gamblin. Assistant Professor, Ph.D., Vanderbilt. Molecular Biociences.
Goodwin P. Garfield. Associate Professor, Ph.D., Kansas. Social Welfare.
John Gauch. Associate Professor, Ph.D., North Carolina. Electrical Engineering & Computer Science.
Susan Gauch. Associate Professor, Ph.D., North Carolina. Electrical Engineering & Computer Science.
Sandra Gauett. Associate Professor, Vice Provost for Faculty Development, Ph.D., Missouri (Columbia). Special Education.
Estela Gavosto. Associate Professor, Ph.D., Washington. Mathematics.
Aleda Gay. Associate Professor, Ph.D., Oklahoma State. Mathematics.
Susan Gay. Associate Professor, Ph.D., Oklahoma State. Teaching & Leadership.
Peter A. Gegenheimer. Associate Professor, Ph.D., Washington. Molecular Biociences.
Joyce Generalli. Clinical Associate Professor, M.S., Kansas. Pharmacy Practice.

Anthony C. Genova. Professor, Chair. Dept. of Philosophy, Ph.D., Chicago. Philosophy.
James Gentri. Professor, Dean, School of Journalism, Ph.D., Missouri. Journalism.
Eaine Gerbert. Associate Professor, Ph.D., Yale. East Asian Languages & Cultures.
John W. Gerigac. Professor, J.D., Indiana. Business.
Deborah J. Gerner. Professor, Ph.D., Northwestern. Political Science.
Jane Gibson. Associate Professor, Ph.D., Florida (Gainesville). Anthropology.
Malcolm Gibson. Assistant Professor, M.A., Florida. Journalism.
Maureen Gillespie. Assistant Professor, Ph.D., New York. French & Italian.
Donna Ginthner. Associate Professor, Ph.D., Wisconsin (Madison). Economics.
Richard S. Givens. Professor, Ph.D., Wisconsin. Chemistry.
Douglas R. Glissnapp. Professor, Ph.D., George Peabody. Psychology & Research in Education.
Jennifer Gleason. Assistant Professor, Ph.D., Yale. Ecology & Evolutionary Biology.
Denise Gobert. Assistant Professor, Ph.D., Texas (Austin). Physical Therapy & Rehabilitation Science.
Michael Godard. Assistant Professor, Ph.D., Ball State. Health, Sport, & Exercise Sciences.
Stephen Goddard. Professor, Ph.D., Iowa. History of Art.
Alan Godwin. Assistant Professor, Ph.D., Yale. Molecular & Integrative Physiology.
Harold N. Godwin. Professor, Chair. Dept. of Pharmacy Practice, M.S., Ohio State. Pharmacy Practice.
Eilen Reid Gold. Associate Professor, Ph.D., Illinois. Communication Studies.
Robert Goldstein. Merrill W. Haas Distinguished Professor, Ph.D., Wisconsin (Madison). Geology.
Luis Gonzalez. Associate Professor, Ph.D., Michigan. Geology.
Norberto C. Gonzalez. Professor, M.D., Universidad Nacional de La Plata. Molecular & Integrative Physiology.
Manuela Gonzalez-Bueno. Assistant Professor, Ph.D., Pennsylvania State. Teaching & Leadership.
Marilu Goodyear. Associate Professor, Vice Provost for Information Services, Ph.D., Colorado. Public Administration.
Michael A. Gordon. Associate Professor, Ph.D., California (San Francisco). Nurse Anesthesia, Pharmacology, Toxicology, & Therapeutics.
Pamela Gordon. Associate Professor, Chair. Dept. of Classics, Ph.D., Bryn Mawr. Classics.
David Graham. Associate Professor, Ph.D., Arizona. Civil, Environmental, & Architectural Engineering.
Maryemma Graham. Professor, Ph.D., Cornell. English.
Dennis Grauer. Assistant Professor, Ph.D., Ohio State. Pharmacy Practice.
Sandra Gray. Associate Professor, Ph.D., State Univ. of New York (Binghamton). Anthropology.
J. Megan Green. Assistant Professor, Ph.D., Oklahoma. History.
Marc L. Greenberg. Professor, Chair. Dept. of Slavic Languages & Literatures, Ph.D., California (Los Angeles). Slavic Languages & Literatures.
J. Leon Greene. Associate Professor, Ph.D., Utah. Health, Sport, & Exercise Sciences.
Lois Greene. Professor, Associate Dean, School of Fine Arts, M.F.A., Kansas. Design.
Andrea Greenhoot. Assistant Professor, Ph.D., North Carolina. Psychology.
Charles R. Greenwood. Professor, Ph.D., Utah. Special Education.
Robert Gregory. Assistant Professor, Ph.D., Pennsylvania State. Health, Sport, & Exercise Sciences.
David Griffin. Associate Professor, M.Arch., Rice. Architecture, Urban Design.
David A. Grissu. Associate Scientist, Ph.D., Pennsylvania State. Geology.
James E. Grobe. Assistant Professor, Ph.D., Pittsburgh. Psychology.
John L. Gronbeck-Tedesco. Professor, Associate Dean, College of Liberal Arts & Sciences, Ph.D., Iowa. Theatre & Film.
Gary L. Grunewald. Professor, Chair. Dept. of Medicinal Chemistry, Ph.D., Wisconsin. Medicinal Chemistry.
Citing the excellence of KU's faculty, the 2003 Fiske Guide to Colleges gives the university four stars for academic strength, social activities, and quality of life.

The Lied Center Series includes the Concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and the Lied Family Series, bringing outstanding performers to KU each year.

Graduate Faculty

William C. Johnson, Professor, Ph.D., Wisconsin. Geography.
Jocelyn Johnston, Associate Professor, Ph.D., Syracuse. Political Science.
Virginia F. Johnston, Associate Professor, Ph.D., Missouri (Kansas City). Nurse Anesthesia.
Allard Jongman. Associate Professor, Ph.D., Brown. Linguistics.
Mary Anne Jordan. Associate Professor, M.F.A., Cranbrook Academy. Design.
Kissan Joseph. Assistant Professor, Ph.D., Purdue. Business.
Mark Joslyn. Associate Professor, Ph.D., Washington (St. Louis). Political Science.
Blum-clu Ju. Assistant Professor, Ph.D., Rochester. Economics.
Ted Juhl. Assistant Professor, Ph.D., Illinois. Economics.
Woo Sik Jung. Assistant Professor, Ph.D., Yale. Economics.
James F. Juola. Professor, Ph.D., Stanford. Psychology.
Julie Kaarbo. Associate Professor, Ph.D., Ohio. Political Science.
Roger L. Kaelser. Professor, Ph.D., Kansas. Geology.
Stephen Kapp. Associate Professor, Ph.D., Michigan State. Social Welfare.
Andrez Karcz. Assistant Professor, Ph.D., Chicago. Slavic Languages & Literatures.
Dennis H. Karpowitz. Associate Professor, Ph.D., Oregon. Psychology.
Gilbert Karuga. Assistant Professor, Ph.D., Connecticut. Business.
Daniel Katz. Professor, Ph.D., Texas. Mathematics.
David M. Katzman. Professor, Ph.D., Michigan. American Studies.
John Keating. Associate Professor, Ph.D., Northwestern. Economics.
William D. Keel. Professor, Chair, Dept. of Germanic Languages & Literatures, Ph.D., Indiana. Germanic Languages & Literatures.
George A. Kelhais. Professor, Ph.D., Alabama. Psychology.
Alton D. Kelly Jr. Associate Professor, Ph.D., North Carolina. French & Italian.
John Kelly. Assistant Professor, Ph.D., Chicago. Ecology & Evolutionary Biology.
Paul Kelly. Professor, Chair, Dept. of Molecular Biosciences, Ph.D., Colorado. Molecular Biosciences.
Paul Kelton. Assistant Professor, Ph.D., Oklahoma. History.
Susan J. Kemper. Roy A. Roberts Distinguished Professor, Ph.D., Cornell. Psychology.
John Kepes. Endowment Distinguished Professor & Chancellor's Club Teaching Professor Emeritus, M.D., Budapest. Pathology & Laboratory Medicine.
Marni Kessler. Assistant Professor, Ph.D., Yale. History of Art.
JoAnn Keyston. Professor, Ph.D., Ohio State. Communication Studies.
Susan King. Associate Professor, Ed.D., Columbia. Health, Sport, & Exercise Sciences.
John A. Kinsey. Professor, Ph.D., Texas. Microbiology, Molecular Genetics, & Immunology.
Kathryn A. Kirdg. Associate Professor, Ph.D., Kansas. Human Development & Family Life.
Curtis D. Klaassen. Professor, Ph.D., Iowa. Pharmacology, Toxicology, & Therapeutics.
Jeanne Klein. Associate Professor, Ph.D., Kansas. Theatre & Film.
Jill Kleberg. Associate Professor, Ph.D., Michigan. Business.
H. Earle Knoflton. Associate Professor, Ph.D., Kentucky. Special Education.
Ann Koch. Assistant Professor, Ph.D., North Carolina. Germanic Languages & Literatures.
Paul Koch. Professor, Ph.D., Michigan State. Business.
Vijay Kodyalam. Assistant Professor, Ph.D., Purdue. Mathematics.
Julie Koehler. Assistant Professor, Ph.D., Colorado. Nursing.
Man C. Kong. Associate Professor, Ph.D., Nebraska (Lincoln). Electrical Engineering & Computer Science.
Elizabeth Kowalchuk. Associate Professor, Ph.D., Ohio. Design.
Janice M. Kozma. Professor, Ph.D., Michigan. French & Italian.
Nancy P. Kraft. Assistant Professor, Ph.D., Wisconsin. Teaching & Leadership.
Thomas S. Krieshok. Professor, Ph.D., Missouri (Columbia). Psychology & Research in Education.
Michael Kueple. Associate Professor, M.F.A, Notre Dame. Art.
Krzysztof Kuczera. Associate Professor, Ph.D., Warsaw. Molecular Biosciences, Chemistry.

Jill Kuhnheim. Associate Professor, Ph.D., California. Spanish & Portuguese.
Peleg Kuh. Associate Professor, M.S., Gonzalez. Journalism.
Adrienne Kunke. Associate Professor, Ph.D., Purdue. Communication Studies.
Carl E. Kurt. Professor, Ph.D., Oklahoma State. Civil, Environmental, & Architectural Engineering.
Elizabeth A. Kuznesof. Professor, Chair, Dept. of Latin American Area Studies, Ph.D., California (Berkeley). History.
Melinda Lacy. Associate Professor, Pharm., Kansas. Hospital Pharmacy.
Sue Lai. Associate Professor, Ph.D., Pittsburgh. Preventive Medicine & Public Health.
Brian Laird. Associate Professor, Ph.D., California (Berkeley). Chemistry.
Paul Laird. Associate Professor, Ph.D., North Carolina. Music & Dance.
Audrey Lamb. Assistant Professor, Ph.D., Vanderbilt. Molecular Biosciences.
Melvin D. Langer. Professor, Ph.D., Columbia. English.
Dennis D. Lane. N.T. Yeatich Distinguished Professor, Ph.D., Illinois. Civil, Environmental, & Architectural Engineering.
Jeffrey Lang. Professor, Ph.D., Purdue. Mathematics.
Barbara Langner. Associate Professor, Ph.D., Kansas. Nursing.
James D. Lapoint. Associate Professor, Ph.D., Toledo. Health, Sport, & Exercise Sciences.
Cynthia Larive. Professor, Ph.D., California (Riverside). Chemistry.
Pok Chi Lau. Associate Professor, M.F.A., California Inst. of the Arts. Design.
Theodore Lawwill. Professor, M.D., Vanderbilt. Molecular & Integrative Physiology.
Chia Y. Lee. Professor, Ph.D., Kansas State. Microbiology, Molecular Genetics, & Immunology.
Joe Lee. Professor, Ph.D., Ohio State. Civil, Environmental, & Architectural Engineering.
Robert Lee. Associate Professor, Ph.D., Johns Hopkins. Health Policy & Management.
Steven W. Lee. Associate Professor, Coordinator, School Psychology Program, Ph.D., Nebraska (Lincoln). Psychology & Research in Education.
Mary Leeners. Assistant Professor, Ph.D., Colorado. Nursing.
Maria Len-Rios. Assistant Professor, Ph.D., Missouri. Journalism.
B. Keith Lenz. Associate Professor, Ph.D., Kansas. Special Education.
Mecelie Leonard. Associate Professor, Ph.D., Cornell. Theatre & Film.
David E. Lerner. Professor, Ph.D., Pittsburgh. Mathematics.
V. Parker Lessig. Frank S. Pinet Teaching Professor, Ph.D., Kansas. Business.
Cheryl Lester. Associate Professor, Ph.D., State Univ. of New York. English.
Joan Letendre. Assistant Professor, Ph.D., Illinois. Social Welfare.
Beth Levant. Associate Professor, Ph.D., Duke. Pharmacology, Toxicology, & Therapeutics.
Steven M. LeVine. Professor, Ph.D., Albert Einstein College of Medicine. Molecular & Integrative Physiology.
Thomas J. Lewis. Associate Professor, Chair, Dept. of History, Ph.D., Northwestern. History.
D. Kathleen Lewis. Associate Professor, J.D., Washburn. Physical Therapy & Rehabilitation Science.
Chao Yang Li. Assistant Professor, Ph.D., Southern California. Preventive Medicine & Public Health.
Jonathan Li. Professor, Ph.D., State Univ. of New York. Pharmacology, Toxicology, & Therapeutics.
Xingong Li. Assistant Professor, Ph.D., South Carolina. Geography.
James W. Lichtenberg. Professor, Ph.D., Minnesota. Psychology & Research in Education.
Alice Lieberman. Associate Professor, Ph.D., Wisconsin (Madison). Social Welfare.
Bruce Lieberman. Associate Professor, Ph.D., Columbia. Geology.
Denise Linville. Assistant Professor, Ph.D., Kansas. Journalism.
Charles Little. Professor, Ph.D., Univ. of Pittsburgh School of Medicine. Anatomy & Cell Biology.
Todd Little. Associate Professor, Ph.D., California (Riverside). Psychology.
Weishi Liu. Assistant Professor, Ph.D., Georgia Inst. Mathematics.
Wen Liu. Assistant Professor, Ph.D., Drexel. Physical Therapy & Rehabilitation Science.
Diane From Loeb. Associate Professor, Ph.D., Purdue. Speech-Language-Hearing: Sciences & Disorders.
Stephen P. Lohmeier. Assistant Professor, Ph.D., Massachusetts. Electrical Engineering & Computer Science.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title &amp; Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanley F. Lombardo</td>
<td>Professor, Ph.D., Texas. Classics</td>
</tr>
<tr>
<td>Thomas Longoria</td>
<td>Associate Professor, Ph.D., Texas A&amp;M. Public Administration.</td>
</tr>
<tr>
<td>Burdett A. Loomis</td>
<td>Professor, Ph.D., Wisconsin. Political Science.</td>
</tr>
<tr>
<td>Shane Lopez</td>
<td>Associate Professor, Ph.D., Kansas. Psychology &amp; Research in Education.</td>
</tr>
<tr>
<td>Thomas Lorenz</td>
<td>Associate Professor, M.E.A., Bowling Green. English.</td>
</tr>
<tr>
<td>Catherine Loudon</td>
<td>Associate Professor, Ph.D., Duke. Ecology &amp; Evolutionary Biology.</td>
</tr>
<tr>
<td>Janice Loudon</td>
<td>Associate Professor, Ph.D., Washington. Physical Therapy &amp; Rehabilitation Science.</td>
</tr>
<tr>
<td>Patricia Lowe</td>
<td>Assistant Professor, Ph.D., Texas A&amp;M. Psychology &amp; Research in Education.</td>
</tr>
<tr>
<td>Gerald Lubensky</td>
<td>Professor, M.A., New Mexico. Art</td>
</tr>
<tr>
<td>Carl Luchies</td>
<td>Associate Professor, Ph.D., Michigan. Mechanical Engineering.</td>
</tr>
<tr>
<td>Donna Luckey</td>
<td>Associate Professor, Ph.D., California (Berkley). Architecture, Urban Planning.</td>
</tr>
<tr>
<td>Angela Lumpkin</td>
<td>Dean, School of Education, Ph.D., Ohio State. Health, Sport, &amp; Exercise Sciences.</td>
</tr>
<tr>
<td>Eric Lundquist</td>
<td>Assistant Professor, Ph.D., Minnesota. Molecular Biosciences.</td>
</tr>
<tr>
<td>Craig Lunte</td>
<td>Professor, Chair, Dept. of Chemistry, Ph.D., Purdue. Chemistry.</td>
</tr>
<tr>
<td>Susan Lunte</td>
<td>Associate Professor, Ph.D., Purdue. Pharmaceutical Chemistry.</td>
</tr>
<tr>
<td>Joseph F. Lutkenhaus</td>
<td>Professor, Ph.D., California (Los Angeles). Microbiology, Molecular Genetics, &amp; Immunology.</td>
</tr>
<tr>
<td>Elizabeth MacConaghy</td>
<td>Assistant Professor, Ph.D., Michigan. History.</td>
</tr>
<tr>
<td>Ronald R. MacGregor</td>
<td>Professor, Ph.D., Indiana. Anatomy &amp; Cell Biology.</td>
</tr>
<tr>
<td>Beverly Mack</td>
<td>Associate Professor, Ph.D., Wisconsin (Madison). American Studies.</td>
</tr>
<tr>
<td>Kenneth D. Mackenzie</td>
<td>Edmund P. Learned Distinguished Professor, Ph.D., California (Berkley). Business.</td>
</tr>
<tr>
<td>G.L. Macpherson</td>
<td>Associate Professor, Ph.D., Texas (Austin). Geology.</td>
</tr>
<tr>
<td>Stephen Magnus</td>
<td>Assistant Professor, Ph.D., Michigan. Health Policy &amp; Management.</td>
</tr>
<tr>
<td>Marc Mahilos</td>
<td>Professor, Ph.D., Arizona State. Teaching &amp; Leadership.</td>
</tr>
<tr>
<td>Renate R. Mai-Dalton</td>
<td>Associate Professor, Ph.D., Washington. Business.</td>
</tr>
<tr>
<td>Judith Major</td>
<td>Professor, M.S., Pennsylvania. Architecture.</td>
</tr>
<tr>
<td>Loren Maletsky</td>
<td>Assistant Professor, Ph.D., Purdue. Mechanical Engineering.</td>
</tr>
<tr>
<td>Helena Malinakova</td>
<td>Assistant Professor, Ph.D., Illinois Inst. of Technology. Chemistry.</td>
</tr>
<tr>
<td>Satyagopal Mandal</td>
<td>Professor, Ph.D., Indian Statistical Inst. Mathematics.</td>
</tr>
<tr>
<td>Patricia Manning</td>
<td>Assistant Professor, Ph.D., Yale. Spanish &amp; Portuguese.</td>
</tr>
<tr>
<td>Beth Manolescu</td>
<td>Assistant Professor, Ph.D., Illinois (Urban). Communication Studies.</td>
</tr>
<tr>
<td>Paul L. Markham</td>
<td>Associate Professor, Ph.D., Ohio State. Teaching &amp; Leadership.</td>
</tr>
<tr>
<td>Margaret Marco</td>
<td>Assistant Professor, M.M.E., Iowa. Music &amp; Dance.</td>
</tr>
<tr>
<td>Glen Marotz</td>
<td>Professor, Associate Dean, Research &amp; Graduate Programs, School of Engineering, Ph.D., Illinois. Civil, Environmental, &amp; Architectural Engineering.</td>
</tr>
<tr>
<td>Donald Marquard</td>
<td>Professor, Ph.D., Indiana. Philosophy.</td>
</tr>
<tr>
<td>Charles Marsh</td>
<td>Associate Professor, Ph.D., Kansas. Journalism.</td>
</tr>
<tr>
<td>Craig E. Martin</td>
<td>Chancellors Club Teaching Professor, Chair, Dept. of Ecology &amp; Evolutionary Biology, Ph.D., Duke. Ecology &amp; Evolutionary Biology.</td>
</tr>
<tr>
<td>Larry D. Martin</td>
<td>Professor, Ph.D., Kansas. Ecology &amp; Evolutionary Biology.</td>
</tr>
<tr>
<td>Mirecza Martin</td>
<td>Assistant Professor, Ph.D., Iasi. Romania. Mathematics.</td>
</tr>
<tr>
<td>Rex Martin</td>
<td>Professor, Ph.D., Columbia. Philosophy.</td>
</tr>
<tr>
<td>Edward A. Martinko</td>
<td>Professor, Ph.D., Kansas. Ecology &amp; Evolutionary Biology.</td>
</tr>
<tr>
<td>Leonie Marx</td>
<td>Professor, Ph.D., Illinois. Germanic Languages &amp; Literatures.</td>
</tr>
<tr>
<td>Adolfo Matamoros</td>
<td>Assistant Professor, Ph.D., Illinois. Civil, Environmental, &amp; Architectural Engineering.</td>
</tr>
<tr>
<td>Jeremy A. Matchett</td>
<td>Professor, Ph.D., Kansas. Pharmacy Practice.</td>
</tr>
<tr>
<td>R. Mark Mathews</td>
<td>Professor, Ph.D., Kansas. Human Development &amp; Family Life.</td>
</tr>
<tr>
<td>Judith A. Mathewson</td>
<td>Assistant Professor, M.S., Kansas. Nurse Anesthesia.</td>
</tr>
<tr>
<td>Lawrence Maxey</td>
<td>Professor, D.M.A., Eastman School of Music. Music &amp; Dance.</td>
</tr>
<tr>
<td>Jonathan Mayhew</td>
<td>Associate Professor, Ph.D., Stanford. Spanish &amp; Portuguese.</td>
</tr>
<tr>
<td>Steven W. Maynard-Moody</td>
<td>Professor, Ph.D., Cornell. Political Science.</td>
</tr>
<tr>
<td>Matthew Mayo</td>
<td>Associate Professor, Ph.D., Alabama. Preventive Medicine &amp; Public Health.</td>
</tr>
<tr>
<td>Steven L. McCabe</td>
<td>Professor, Ph.D., Illinois. Civil, Environmental, &amp; Architectural Engineering.</td>
</tr>
<tr>
<td>Kenneth McCarson</td>
<td>Associate Professor, Ph.D., Georgia. Pharmacology, Toxicology, &amp; Therapeutics.</td>
</tr>
<tr>
<td>Kevin McEldown</td>
<td>Assistant Professor, Ph.D., Kansas State. Preventive Medicine &amp; Public Health.</td>
</tr>
<tr>
<td>George F. McEldown</td>
<td>Associate Professor, Ph.D., Wisconsin. Psychology &amp; Research in Education.</td>
</tr>
<tr>
<td>Thomas P. McDonald</td>
<td>Professor, Ph.D., Wisconsin (Madison). Social Welfare.</td>
</tr>
<tr>
<td>Joan McDowell</td>
<td>Professor, Ph.D., Toronto. Occupational Therapy.</td>
</tr>
<tr>
<td>Carl McElnwee</td>
<td>Professor, Ph.D., Kansas. Geology.</td>
</tr>
<tr>
<td>Bruce M. McEnroe</td>
<td>Professor, Ph.D., Kansas. Civil, Environmental, &amp; Architectural Engineering.</td>
</tr>
<tr>
<td>Donal McGee</td>
<td>Associate Professor, Ph.D., Northwestern. Physics &amp; Astronomy.</td>
</tr>
<tr>
<td>Brian McKenna</td>
<td>Instructor, Ph.D., Kansas. Physical Therapy &amp; Rehabilitation Science.</td>
</tr>
<tr>
<td>Philip C. McKnight II</td>
<td>Professor, Chair, Dept. of Teaching &amp; Leadership, Ph.D., Stanford. Teaching &amp; Leadership.</td>
</tr>
<tr>
<td>Roderick McLenan</td>
<td>Professor, Ph.D., Kansas. Hearing &amp; Speech.</td>
</tr>
<tr>
<td>Keith McMahon</td>
<td>Professor, Chair, Dept. of Asian Languages &amp; Cultures, Ph.D., Princeton. Asian Languages &amp; Cultures.</td>
</tr>
<tr>
<td>Mario Medina</td>
<td>Associate Professor, Ph.D., Texas A&amp;M. Civil, Environmental, &amp; Architectural Engineering.</td>
</tr>
<tr>
<td>Mikhail Medvedev</td>
<td>Professor, Ph.D., California (San Diego). Physics &amp; Astronomy.</td>
</tr>
<tr>
<td>Paul E. Meier</td>
<td>Professor, B.A., Canterbury. Theatre &amp; Film.</td>
</tr>
<tr>
<td>Adrian Melott</td>
<td>Professor, Ph.D., Texas. Physics &amp; Astronomy.</td>
</tr>
<tr>
<td>Genaro Mendez</td>
<td>Assistant Professor, D.M.A., Oregon. Music &amp; Dance.</td>
</tr>
<tr>
<td>Valerie Mendosa</td>
<td>Assistant Professor, Ph.D., California (Berkley). History.</td>
</tr>
<tr>
<td>Lewis A. Mennerick</td>
<td>Associate Professor, Ph.D., Northwestern. Sociology.</td>
</tr>
<tr>
<td>Edward L. Meyen</td>
<td>Professor, Ph.D., Iowa. Special Education.</td>
</tr>
<tr>
<td>Garth Meyers</td>
<td>Assistant Professor, Ph.D., California (Los Angeles). Geography.</td>
</tr>
<tr>
<td>Elias K. Michaelis</td>
<td>University Distinguished Professor of Pharmacology &amp; Toxicology, Chair, Dept. of Pharmacology &amp; Toxicology, M.D., St. Louis, Ph.D., Kentucky. Molecular Bionanosciences.</td>
</tr>
<tr>
<td>Mary L. Michaelis</td>
<td>Professor, Ph.D., Kansas. Pharmacology &amp; Toxicology.</td>
</tr>
<tr>
<td>C. Russell Middaugh</td>
<td>Takeru Higuchi Distinguished Professor, Ph.D., Cornell. Pharmaceutical Chemistry.</td>
</tr>
<tr>
<td>James H. Mielke</td>
<td>Professor, Chair, Dept. of Anthropology, Ph.D., Massachusetts. Anthropology.</td>
</tr>
<tr>
<td>Gerald E. Mikkelsen</td>
<td>Professor, Ph.D., Wisconsin. Slavic Languages &amp; Literatures, Russian &amp; East European Studies.</td>
</tr>
<tr>
<td>James R. Miller</td>
<td>Associate Professor, Ph.D., Purdue. Electrical Engineering &amp; Computer Science.</td>
</tr>
<tr>
<td>Karen Miller</td>
<td>Professor, Dean, Schools of Allied Health &amp; Nursing, Ph.D., Colorado. Nursing.</td>
</tr>
<tr>
<td>L. Keith Miller</td>
<td>Professor, Ph.D., Illinois. Human Development &amp; Family Life.</td>
</tr>
<tr>
<td>Timothy Miller</td>
<td>Professor, Ph.D., Kansas. Religious Studies.</td>
</tr>
<tr>
<td>Gary J. Minden</td>
<td>Professor, Ph.D., Kansas. Electrical Engineering &amp; Computer Science.</td>
</tr>
<tr>
<td>Paul Mirecki</td>
<td>Associate Professor, Chair, Dept. of Religious Studies, Th.D., Harvard. Religious Studies.</td>
</tr>
<tr>
<td>Sanjay Mishra</td>
<td>Associate Professor, Ph.D., Washington State. Business.</td>
</tr>
<tr>
<td>Lester A. Milsche</td>
<td>University Distinguished Professor, Ph.D., Wayne State. Medicinal Chemistry.</td>
</tr>
<tr>
<td>Craig Molgaard</td>
<td>Professor, Ph.D., California (Berkley). Preventive Medicine &amp; Public Health.</td>
</tr>
<tr>
<td>John Montfort</td>
<td>Assistant Professor, Ph.D., Remsenauer Polytechnic Inst. Communication Studies.</td>
</tr>
<tr>
<td>Felix Moos</td>
<td>Professor, Ph.D., Washington. Anthropology.</td>
</tr>
<tr>
<td>Jeffrey Moran</td>
<td>Associate Professor, Ph.D., Harvard. History.</td>
</tr>
<tr>
<td>Christine A. Morello</td>
<td>Clinical Associate Professor, Ph.D., Kansas. Preventive Medicine &amp; Public Health.</td>
</tr>
<tr>
<td>Darcy Morey</td>
<td>Assistant Professor, Ph.D., Tennessee. Anthropology.</td>
</tr>
</tbody>
</table>
Christopher Morphew. Associate Professor, Ph.D., Stanford. Teaching & Leadership. 


Mark Mort. Assistant Professor, Ph.D., Washington State. Ecology & Evolutionary Biology. 

Michael Mosier. Assistant Professor, Ph.D., Colorado State. Preventive Medicine & Public Health. 

Charlene Muehlenhard. Professor, Ph.D., Wisconsin (Madison). Psychology. 

Thomas E. Mulinazzi. Professor, Chair, Dept. of Civil, Environmental, & Architectural Engineering, Ph.D., Purdue. Civil, Environmental, & Architectural Engineering. 

Karen Multon. Professor, Chair, Dept. of Psychology and Research, Ph.D., Loyola Univ. Psychology & Research in Education. 

Eric Munson. Associate Professor, Ph.D., Texas A&M. Pharmaceutical Chemistry. 

Michael Murray. Assistant Professor, Ph.D., Pittsburgh. Physics & Astronomy. 

Richard S. Musser Jr. Clyde M. Reed Teaching Professor, Ph.D., Indiana. Journalism. 

Garth Myers. Associate Professor, Ph.D., California (Los Angeles). Geography. 

Brenda Smith Myles. Associate Professor, Ph.D., Kansas. Special Education. 


Mehrantz Najafizadeh. Associate Professor, Ph.D., Kansas. Sociology. 

John Nalbandian. Professor, Chair, Dept. of Public Administration, Ph.D., Southern California. Political Science. 

Yoonmi Nam. Assistant Professor, M.F.A., Rhode Island School of Design. Art. 

Rita G. Napier. Associate Professor, Ph.D., American Univ. History. 

Operada Ntiranyan. Marion Merrell Dow Distinguished Professor of Aging, Chair, Dept. of Microbiology, Molecular Genetics, & Immunology, Ph.D., India. Microbiology, Molecular Genetics, & Immunology. 

Anna Neill. Associate Professor, Ph.D., Cornell. English. 


Kristi Neufeld. Assistant Professor, Ph.D., Utah. Molecular Biosciences. 

Barry Newton. Professor, Ph.D., D.Arch., Tham's Polytechnic Architecture. 

Trung Van Nguyen. Associate Professor, Ph.D., Texas A&M. Chemical & Petroleum Engineering. 

Douglas Niehaus. Associate Professor, Ph.D., Massachusetts. Electrical Engineering & Computer Science. 

Diane Corcoran Nielsen. Associate Professor, Ph.D., Minnesota. Teaching & Leadership. 


Randolph Nudo. Professor, Ph.D., Florida State. Molecular & Integrative Physiology. 


William O'Connor. Lecturer, Ph.D., Kansas. Psychology. 

Jeffrey Olafsen. Assistant Professor, Ph.D., Duke. Physics & Astronomy. 

Linda Olafsen. Assistant Professor, Ph.D., Duke. Physics & Astronomy. 

Marla Orive. Assistant Professor, Ph.D., California (Berkeley). Ecology & Evolutionary Biology. 

James A. Orr. Professor, Chair, Div. of Biological Sciences, Ph.D., Wisconsin. Molecular Biosciences. 

Russell Osternmann. Associate Professor, Ph.D., Kansas. Chemical & Petroleum Engineering. 

Michael Oszko. Associate Professor, Pharm.D., Cincinnati. Pharmacy Practice. 

Yoshikiko Otani. Professor, Ph.D., Minnesota. Economics. 

Lisa Ottinger. Assistant Professor, Ph.D., Texas A&M. Business. 

Arlo Oviatt. Assistant Professor, M.A., St. Louis, Journalism. 


Leonie Pallikkathayil. Associate Professor, D.N.S., Indiana. Nursing. 

Elena Papastasiou. Assistant Professor, Ph.D., Michigan State. Psychology & Research in Education. 

Stephen J. Parker. Professor, Ph.D., Cornell. Slavic Languages & Literatures, Russian & East European Studies. 


Michael J. Parmely. Professor, Ph.D., Iowa. Microbiology, Molecular Genetics, & Immunology. 

Alfred D. Pan. Professor, Ph.D., Iowa. Civil, Environmental, & Architectural Engineering. 

Donald W. Parsons. Professor, Ph.D., Minnesota. Communication Studies. 

Robert Parsons. Assistant Professor, Ph.D., Georgia Tech. Civil, Environmental, & Architectural Engineering. 


Allan H. Pasco. Hall Family Foundation Distinguished Professor, Ph.D., Michigan. French & Italian. 

Bozena Paslak-Duncan. Professor, Ph.D., Central School of Planning & Statistics, Mathematics. 

Jim Paul. Assistant Professor, Ph.D., New Mexico State. Health Policy & Management. 

Diane E.S. Payne. Associate Academic Coordinator of Clinical Education, Physical Therapy & Rehabilitation Science, M.P.T., Emory Univ. 

Thomas L. Pazdernik. Professor, Ph.D., Kansas. Pharmacology, Toxicology, & Therapeutics. 

Bill Peeling. Professor, Ph.D., Michigan. Pathology & Laboratory Medicine. 

Dorothy Pennington. Associate Professor, Ph.D., Kansas. Communication Studies. 

Subhashan Parera. Assistant Professor, Ph.D., Kansas State. Preventive Medicine & Public Health. 

Diane Persson. Associate Professor, M.D., Kansas. Pathology & Laboratory Medicine. 

Andrew Peterson. Assistant Professor, Ph.D., Chicago. Ecology & Evolutionary Biology. 

K. Jean Peterson. Associate Professor, D.S.W., Columbia. Social Welfare. 


Nancy L. Peterson. Professor, Ph.D., Brigham Young. Special Education. 

Christopher G. Petz. Professor, Ph.D., Kansas. Social Welfare. 


Barbara J. Phipps. Associate Professor, Ph.D., Kansas State. Teaching & Leadership. 

William Picking. Associate Professor, Ph.D., Kansas. Molecular Biosciences. 


Ray Pierotti. Associate Professor, Ph.D., Dalhouse. Ecology & Evolutionary Biology. 

John P. Poggio. Professor, Ph.D., Boston College. Psychology & Research in Education. 

Patricia Pohl. Associate Professor, Ph.D., Southern California. Physical Therapy & Rehabilitation Science. 

Sue Ann Popkess-Vawter. Professor, Ph.D., Texas. Nursing. 

Jack R. Porter. Balfour S. Jeffrey Teaching Professor, Chair, Dept. of Mathematics, Ph.D., New Mexico State. Mathematics. 

Rosalea Postma-Cartt. Assistant Professor, Ph.D., Cornell. Spanish & Portuguese. 

Glenn Prescott. John & Winifred Sharp Teaching Professor, Ph.D., Georgia Inst. of Technology. Electrical Engineering & Computer Science. 

Allan N. Press. Associate Professor, Ph.D., Clark. Social Welfare. 

Catherine Preston. Associate Professor, Ph.D., Pennsylvania. Theatre & Film. 

Gary E. Price. Professor, Ph.D., Michigan State. Psychology & Research in Education. 

Kevin Price. Professor, Ph.D., Utah. Geography. 


John Pultz. Associate Professor, Ph.D., New York. History of Art. 

Bangere Pumaraprajna. Assistant Professor, Ph.D., Brandeis. Mathematics. 

Clifton Pye. Associate Professor, Ph.D., Pittsburgh. Child Language, Linguistics. 

Sandra Quackenbush. Assistant Professor, Ph.D., Colorado State. Molecular Biosciences. 

Dennis B. Quinn. Professor, Ph.D., Wisconsin. English. 

Jeffrey Radel. Associate Professor, Ph.D., Dalhouse Univ. Occupational Therapy. 

Ivanka Radovanovic. Assistant Professor, Ph.D., Belgrade. Anthropology. 

Ronald Ragan. Clinical Assistant Professor, Ph.D., Kansas. Pharmacy Practice. 

Lance G. Rako. Associate Professor, M.F.D., North Carolina State. Design. 


Guillermo Ramirez. Assistant Professor, Ph.D., Texas. Civil, Environmental, & Architectural Engineering. 

Eugene A. Ramp. Courtesy Assistant Professor, Ph.D., Kansas. Human Development & Family Life. 


Robert Rankin. Professor, Ph.D., Chicago. Linguistics. 

Michael A. Rapoff. Courtesy Assistant Professor, Ph.D., Kansas. Human Development & Family Life. 


Eric Rath. Assistant Professor, Ph.D., Michigan. History. 

Margaret Rausch. Assistant Professor, Ph.D., Free Univ. Religious Studies.
Allen B. Rawitch. Professor, Vice Chancellor for Academic Affairs & Dean, Graduate Studies, KUMC, Ph.D., California (Los Angeles). Biochemistry & Molecular Biology.

Mark Reaney. Professor, M.F.A., Wisconsin. Theatre & Film.


Gregory Reedy. Associate Professor, Ph.D., Wayne State. Pharmacology, Toxicology, & Therapeutics.

Cacilda Rego. Assistant Professor, Ph.D., Texas (Austin). Spanish & Portuguese.

Paul Rehak. Assistant Professor, Ph.D., Bryn Mawr. Classics.

Gary Reich. Associate Professor, Ph.D., North Carolina (Chapel Hill). Political Science.

H. Joseph Reitz. Professor, Ph.D., Massachusetts Inst. of Technology. Business.

Veronica Rempusheski. Associate Professor, Ph.D., Arizona. Nursing.

Mabel L. Rice. Fred and Virginia Merrill Distinguished Professor of Advanced Studies Director, Child Language Program, Ph.D., Kansas. Speech-Language-Hearing: Sciences & Disorders.

Sheri Suzanne Rice. Associate Professor, Ph.D., Illinois. Teaching & Leadership.


Delores Ringer. Associate Professor, M.F.A., Pennsylvania State. Theater & Film.


Adrienne Rivers. Associate Professor, M.A., Missouri. Journalism.


Sally Roberts. Associate Professor, Ph.D., Kansas. Special Education.

Tom Roberts. Assistant Professor, Ph.D., Auburn. Business. Teresa Robertson. Assistant Professor, Ph.D., Princeton. Philosophy.

Janet Robinson. Assistant Professor, Ph.D., Iowa. Chemistry.

Suzanne Robinson. Associate Professor, Ph.D., New Mexico. Special Education.

Brian Rock. Associate Professor, Ph.D., Colorado. Architectural Engineering.


W.M. Kim Roddis. Professor, Ph.D., Massachusetts Inst. of Technology. Civil, Environmental, & Architectural Engineering.

Fred Rodriguez. Associate Professor, Ed.D., Nebraska. Teaching & Leadership.

Jennifer Rogers. Assistant Professor, Ph.D., Texas (Austin). Geology.

Judith Roitman. Professor, Ph.D., California (Berkeley). Mathematics.

Stanley T. Rolfe. Albert P. Learned Distinguished Professor, Ph.D., Illinois. Civil Environmental, & Architectural Engineering.

Barbara Romzek. Professor, Associate Dean, College of Liberal Arts & Sciences, Ph.D., Texas. Political Science.

Dennis Rosen. Associate Professor, Ph.D., Minnesota. Business.

Sara Rosen. Associate Professor, Chair, Dept. of Linguistics, Ph.D., Brandeis. Linguistics.

Joshua Rosenbloom. Professor, Ph.D., Stanford. Economics.

Anton Rosenthal. Associate Professor, Ph.D., Minnesota. History


Claude K. Rowland. Professor, Ph.D., Houston. Political Science.


Robert C. Rowland. Professor, Chair, Dept. of Communication Studies, Ph.D., Kansas. Communication Studies.

Karl K. Rozman. Professor, Ph.D., Innsbruck. Pharmacology, Toxicology, & Therapeutics.

Edward L. Ruhe. Professor, Ph.D., Columbia. English.

John Rury. Professor, Chair, Dept. of Teaching and Leadership, Ph.D., Wisconsin (Madison). Teaching and Leadership.

Tracy Russo. Assistant Professor, Ph.D., Kansas. Communication Studies.

J. Howard Ryting. Professor, Ph.D., Brigham Young. Pharmaceutical Chemistry.

Hossein Saidian. Professor, Ph.D., Kansas State. Electrical Engineering & Computer Science.

Wayne Sailor. Professor, Ph.D., Kansas. Special Education.


William Samonides. Assistant Professor, Ph.D., Harvard. History of Art.

Michael Samborn. Clinical Assistant Professor, Ph.D., Kansas. Pharmacy Practice.


Robert B. Sanders. Professor, Ph.D., Michigan. Molecular Biosciences.

Stephen J. Sanders. Professor, Chair, Dept. of Physics & Astronomy, Ph.D., Yale. Physics & Astronomy.

Paola Sanguinetti. Assistant Professor, M.S., Columbia. Architecture.

Michael P. Sarras. Professor, Director, IGPS, Program, Ph.D., Louisiana State. Anatomy & Cell Biology.

Norman E. Saul. Professor, Ph.D., Columbia. History, Russian & East European Studies.

Sarah Sawyer. Assistant Professor, Ph.D., King's College. Philosophy.

Benjamin C. Sax. Associate Professor, Ph.D., Chicago. History.


Monica Scheibmeyer. Assistant Professor, Ph.D., Kansas. Nursing.


Susan Scholz. Assistant Professor, Ph.D., Southern California. Business.

Emst Schönbrunn. Assistant Professor, Ph.D., Ruhr Univ., Germany. Medicinal Chemistry.


Ann Scharf. Associate Professor, Ph.D., Kansas State. Nursing. Thomas Schreiber. Associate Professor, Ph.D., South Florida. Psychology.

Philip Schrott. Professor, Ph.D., Indiana. Political Science.

JoAnna Schroer. Assistant Professor, Ph.D., St. Louis. Physical Therapy & Rehabilitation Science.

Paul D. Schmuckler. Professor, Chair, Dept. of Political Science, Ph.D., Wisconsin. Political Science.

Catherine E. Schoewer. Associate Professor, Ph.D., North Carolina. Business.


Roland Seifert. Associate Professor, Ph.D., Free Univ. Pharmacology & Toxicology.


Joan Sereno. Associate Professor, Ph.D., Brown. Linguistics.

Margaret Severson. Associate Professor, J.D., Denver. Social Welfare.


K. Sam Shannungan. Southwestern Bell Distinguished Professor, Interim Chair, Dept. of Electrical Engineering & Computer Science, Ph.D., Oklahoma State. Electrical Engineering & Computer Science.

Janet M. Shariastanian. Associate Professor, Ph.D., Brown. English.

Elaine B. Sharp. Professor, Ph.D., North Carolina. Political Science.

Michael Shaw. Associate Professor, Ph.D., Texas. Classics.

Susanne Shaw. Professor, M.S., Kansas. Journalism.


Catherine Shenoy. Assistant Professor, Ph.D., Kansas. Business.


Albert Sheu. Professor, Ph.D., California (Berkeley). Mathematics.

Jong Shi. Associate Professor, Ph.D., Houston. Physics & Astronomy.


Theresa Shireman. Associate Professor, Ph.D., Wisconsin (Madison). Pharmacy Practice.

Barbara Shortridge. Assistant Professor, Ph.D., Kansas. Geography.

James R. Shortridge. Professor, Ph.D., Kansas. Geography.


Terrance Shull. Professor, Ph.D., Arizona. Pharmaceutical Chemistry.

Joseph M. Siciliano. Associate Professor, Chair, Dept. of Economics, Ph.D., Purdue. Economics.


Alan H. Simmons. Courtesy Assistant Professor, Ph.D., Southern Methodist. Anthropology.

Antonio Simões. Associate Professor, Ph.D., Texas (Austin). Spanish & Portuguese.

Gregory Simpson. Professor, Chair, Dept. of Psychology, Ph.D., Kansas. Psychology.

Richard L. Simpson. Professor, Chair, Dept of Special Education, Ed.D., Kansas. Special Education.

Surendra Singh. Assistant Professor, Ph.D., Texas. Political Science.

Mark Reaney. Professor, M.F.A., Wisconsin. Theatre & Film.

Hagith Sivan. Program & Research, School of Business, Ph.D., Wisconsin. Business.

Arthur Skidmore. Associate Professor, Ph.D., Texas. Philosophy.

Lee Skinner. Associate Professor, Ph.D., Emory. Spanish & Portuguese.
**The comprehensive nature of the university's programs enhances its capacity for exploring the world's social and cultural heritage, conducting advanced basic and applied research, and providing service to society, industry, and government.**

—Kansas Board of Regents

**Graduate Faculty**

Thomas M. Skrtic. Professor, Ph.D., Iowa. Special Education.

Norman A. Slade. Professor, Ph.D., Utah State. Ecology & Evolutionary Biology.

Terry A. Slocum. Associate Professor, Chair, Dept of Geography, Ph.D., Kansas. Geography.

Edward S. Small. Professor, Ph.D., Iowa. Theatre & Film.

Carol E. Smith. Professor, Ph.D., Minnesota. Nursing.

David N. Smith. Associate Professor, Ph.D., Wisconsin (Madison). Sociology.

Deborah Smith. Associate Professor, Ph.D., Cornell. Ecology & Evolutionary Biology.

F. Maurice Smith. Courtesy Assistant Professor, M.S., Missouri. Pharmacy Practice.

Irvis Smith. Associate Professor, Ph.D., Indiana. English.

Peter G. Smith. Professor, Ph.D., Duke. Molecular & Integrative Physiology.

Sean J. Smith. Assistant Professor, Ph.D., Virginia. Special Education.

Steven Smith. Assistant Professor, Ed.D., Nevada (Las Vegas). Teaching & Leadership.

Val Smith. Professor, Ph.D., Minnesota. Ecology & Evolutionary Biology.

Charles R. Snyder. M. Erik Wright Distinguished Professor, Ph.D., Vanderbilt. Psychology.


Michael Soares. Professor, Ph.D., Hawaii. Molecular & Integrative Physiology.

Robert Sorem. Associate Professor, Ph.D., Kansas. Mechanical Engineering.

Trevor Sorensen. Associate Professor, D.E., Kansas. Aerospace Engineering.

Curts J. Sorenson. Associate Professor, Ph.D., Wisconsin. Geography.


Richard N. Spano. Associate Professor, Ph.D., Minnesota. Social Welfare.

Daniel G. Spencer. Associate Professor, Ph.D., Oregon. Business.


Lloyd Sponholtz. Associate Professor, Ph.D., Pittsburgh. History.

Joey Sprague. Associate Professor, Ph.D., Wisconsin. Sociology.


Rajendra P. Srivastava. Ernst & Young Teaching Professor, Ph.D., Oregon State. Business.

Saul Stahl. Professor, Ph.D., Western Michigan. Mathematics.


Milena Stanislavova. Assistant Professor, Ph.D., Missouri. Mathematics.

John Stansifer. Associate Professor, M.F.A., Arizona. Theatre & Film.


William G. Staples. Professor, Chair, Dept. of Sociology, Ph.D., Southern California. Sociology.

Jeff Staudinger. Assistant Professor, Ph.D., Texas (Houston). Pharmacology & Toxicology.

Rick Steele Jr. Assistant Professor, Ph.D., Georgia. Clinical Child Psychology.

Don W. Steeple. Dean A. McGee Distinguished Professor, Vice Provost for Scholarly Support, Ph.D. Stanford. Geology, Physics & Astronomy.


Edward Stephens. Professor, Ph.D., Maryland. Anatomy & Cell Biology.


Ronald Stephens. Associate Professor, M.D., Kansas. Nursing.

Dean A. Stetler. Associate Professor, Ph.D., Kansas. Molecular Biosciences.

Daniel Bruce Stevenson. Associate Professor, Ph.D., Columbia. Religious Studies.

Miwha Stevenson. Assistant Professor, Ph.D., Columbia. East Asian Languages & Cultures.


James Stiles. Associate Professor, Ph.D., Michigan. Electrical Engineering & Computer Science.

John Stobaugh. Professor, Ph.D., Kansas. Pharmaceutical Chemistry.

Daniel Stockil. Assistant Professor, Ph.D., Stanford. Geology.

Denise Lauder Stone. Associate Professor, Ph.D., Florida State. Visual Art Education.

Linda Stone-Ferrier. Professor, Chair, Dept. of History of Art, Ph.D., California (Berkeley). History of Art.


Carl Strikwerda. Professor, Ph.D., Michigan. History.

Donald D. Stull. Professor, Ph.D., Colorado. Anthropology.

Bala Subramaniam. Dan F Survey Distinguished Professor, Chair, Dept. of Chemical & Petroleum Engineering, Ph.D., Notre Dame. Chemical & Petroleum Engineering.

Chester L. Sullivan. Associate Professor, Ph.D., Texas Christian. English.


Kathy Suprenant. Professor, Ph.D., Virginia. Molecular Biosciences.

Karan Surana. Deane E. Ackers Distinguished Professor, Ph.D., Wisconsin. Mechanical Engineering.


Tsunee Suzuki. Professor, M.D., Ph.D., Hokkaido, Tokyo. Microbiology, Molecular Genetics, & Immunology.


Michael Swann. Associate Professor, Associate Dean, School of Architecture & Urban Design, Ph.D., Syracuse. Architecture.

John F. Sweats. Professor, Chair, Dept. of Theatre & Film, Ph.D., Duke. History.

Marcie Swift. Teaching Associate, Physical Therapy & Rehabilitation Science, M.S.P.T., Kansas State.


Ray Taghavi. John & Winifred Sharp Teaching Professor, Ph.D., Kansas. Aerospace Engineering.

Fusao Takasagawa. Professor, Ph.D., Osaka City. Molecular Biology.

Carmen Taleghani-Nikazam. Assistant Professor, Ph.D., Texas (Austin). Germanic Languages & Literatures.

Merrill Tarr. Professor, Ph.D., Case Western Reserve. Molecular & Integrative Physiology.

Joseph S. Tash. Associate Professor, Ph.D., Cambridge (England). Molecular & Integrative Physiology.

Roma Taunton. Professor, Ph.D., Kansas. Nursing.

Ossama Tawfik. Professor, Ph.D./M.D., Kansas. Pathology & Laboratory Medicine.

Edith Taylor. Professor, Ph.D., Ohio State. Ecology & Evolutionary Biology.


Thomas Taylor. Roy A. Roberts Distinguished Professor, Chair, Dept. of Ecology & Evolutionary Biology, Ph.D., Illinois (Urbana). Ecology & Evolutionary Biology.

Cynthia Teel. Associate Professor, Ph.D., Arizona. Nursing.

L. Keith Tennant. Professor, Chair, Dept. of Health, Sport, & Exercise Sciences, Ph.D., Florida State. Health, Sport, & Exercise Sciences.

Peter W. TenPas. Associate Professor, Ph.D., Iowa State. Mechanical Engineering.

Paul F. Terranova. Professor, Ph.D., Louisiana State. Molecular & Integrative Physiology.

Valery Terwilliger. Associate Professor, Ph.D., California (Los Angeles). Geography.


Kelli Thomas. Assistant Professor, Ph.D., Kansas. Teaching & Leadership.

Patricia Thomas. Professor, Interim Chair, Dept. of Pathology & Laboratory Medicine, M.D., New York Univ. School of Medicine. Pathology & Laboratory Medicine.

Barbara Thompson. Associate Professor, Ph.D., Kansas. Special Education.


Rachel Thompson. Assistant Professor, Ph.D., Florida. Human Development & Family Life.

John Tibbetts. Associate Professor, Ph.D., Kansas. Theatre & Film.

John Tidwell. Associate Professor, Ph.D., Minnesota. English.


Thomas Timmons. Associate Professor, Ph.D., Johns Hopkins. Molecular Biosciences.

Nona F. Tolleson. Professor, Ph.D., Purdue. Psychology & Research in Education.

Elizabth Topp. Associate Professor, Ph.D., Michigan. Pharmaceutical Chemistry.


Ray Tricker. Assistant Professor, Ph.D., Oregon. Health, Sport, & Exercise Sciences.

Linda Trueb. Associate Professor, Ph.D., Minnesota. Ecology & Evolutionary Biology.

Costas Tsatsoulis. Professor, Ph.D., Purdue. Electrical Engineering & Computer Science.

William Tsutsui. Assistant Professor, Ph.D., Princeton. History.

Donna Tucker. Associate Professor, Ph.D., Colorado. State. Physics & Astronomy.

Sherrie Tucker. Assistant Professor, Ph.D., California (Santa Cruz). American Studies.

Jon Tunge. Assistant Professor, Ph.D., Columbia. Chemistry.

Thomas Tuozzo. Associate Professor, Ph.D., Yale. Philosophy.

Carol Warren. Assistant Professor, Ph.D., Shanghai. Molecular Biosciences.

Jin Hui Wang. Associate Professor, Ph.D., Texas. Geology.


Robert C. Umhoftz. Associate Professor, M.S., Kansas. Mechanical Engineering.

I. Peter Ukpongokwu. Professor, Chair, Dept. of African & African-American Studies, Ph.D., Kansas. Theatre & Film.

Max Utzler. Associate Professor, Ph.D., Missouri. Journalism.

Dennis P. Valenzano. Professor, Ph.D., Case Western Reserve. Molecular & Integrative Physiology.

Gregory Vanden Heuvel. Assistant Professor, Ph.D., Univ. of Alabama & Integrative Physiology.

Hong-Guo Xu. Associate Professor, Ph.D., Fudan. Mathematics.

David Varney. Associate Professor, B.F.A., Art Center College of Design (Los Angeles). Design.

F. Maria Velascos. Associate Professor, M.F.A., California. Art.

Alexander Veretenikov. Associate Professor, Ph.D., Moscow State Univ. Mathematics.


Dave Vertacnik. Associate Professor, M.E.A., Alfred Univ. Design.

Pat Villenueve. Associate Professor, Ph.D., Arizona. Visual Arts Education.

Marta Vincente. Assistant Professor, Ph.D., Johns Hopkins. History.

Thomas Volek. Associate Professor, M.A., Wisconsin. Journalism.

James L. Voogt. Professor, Ph.D., Michigan State. Molecular & Integrative Physiology.


J. Douglas Walker. Professor, Ph.D., Massachusetts Inst. of Technology. Geology.

Cynthia Anne Walle. Courtesy Assistant Professor, Ph.D., Rochester. Molecular Biosciences.

Chris Walther-Thomas. Professor, Chair, Dept. of Special Education, Ph.D., Kansas. Special Education.

Anthony W. Walton. Associate Professor, Ph.D., Texas. Geology.

Karen Wambach. Assistant Professor, Ph.D., Arizona. Nursing.

Jin Hui Wang. Assistant Professor, Ph.D., Shanghai. Molecular Biosciences.

Carol Warren. Professor, Ph.D., California (San Diego). Sociology.

Donald Watkins. Associate Professor, Ph.D., Indiana. Linguistics.


Robert F. Weaver. Professor, Associate Dean, College of Liberal Arts & Sciences, Ph.D., Duke. Molecular Biosciences.


Thomas J. Weiss. Assistant Professor, Ph.D., North Carolina. Economics.

Tara Weich. Assistant Professor, Ph.D., California (Los Angeles). Classics.

Jack M. Weller. Assistant Professor, Ph.D., Ohio State. Sociology.

Michael J. Werle. Associate Professor, Ph.D., Southern California. Anatomy & Cell Biology.

Gina Westergard. Associate Professor, M.F.A., Indiana. Design.

Michael Weymeyer. Associate Professor, Ph.D., Texas. Special Education.


Glen White. Associate Professor, Ph.D., Kansas. Human Development & Family Life.

Stacy White. Assistant Professor, Ph.D., Wisconsin (Madison). Urban Planning.

Steven White. Associate Professor, Ph.D., Texas A&M. Teaching & Leadership.

Andrew Whitford. Assistant Professor, Ph.D., Washington. Political Science.


Judith E. Widen. Associate Professor, Ph.D., Washington. Hearing & Speech.

Kim A. Wilcox. Professor, Dean, College of Liberal Arts & Sciences, Ph.D., Purdue. Speech-Language-Hearing Sciences & Disorders.

Edward O. Wiley III. Professor, Ph.D., City Univ. of New York. Ecology & Evolutionary Biology.

Deborah Wilkinson. Assistant Professor, Ph.D., California (Berkeley). Social Welfare.


Kristine Williams. Assistant Professor, Ph.D., Kansas. Nursing.

Phoebe Williams. Professor, Ph.D., Pittsburgh. Nursing.

Susan M. Williams. Assistant Professor, Ph.D., Oklahoma. Chemical & Petroleum Engineering.

Kevin Willmott. Assistant Professor, M.F.A., New York Univ School of Art, Theatre & Film.

George S. Wilson. Takera Higuchi Distinguished Professor, Ph.D., Illinois. Chemistry.


Sara Wilson. Assistant Professor, Ph.D., Massachusetts Inst. of Technology. Mechanical Engineering.


Anita L. Wingate. Associate Professor, Ph.D., Kansas. Nursing.

James W. Woolfall. Professor, Ph.D., St. Andrews. Philosophy.

Michael W. Wolfe. Associate Professor, Ph.D., Nebraska. Molecular & Integrative Physiology.

Lisa Wolf-Wendel. Associate Professor, Ph.D., Claremont. Teaching & Leadership.

Jane Wong. Associate Professor, B.F.A., Art Center College of Design. Design.

John Wood. Associate Professor, Ph.D., Michigan. Molecular & Integrative Physiology.


Donald E. Worster. Hall Family Foundation Distinguished Professor, Ph.D., Yale. History.

Douglas Wright. Associate Professor, Ph.D., Kentucky. Anatomy & Cell Biology.

Jack B. Wright. Professor, Ph.D., Kansas. Theatre & Film.

Lawrence S. Wrightsman Jr. Professor, Ph.D., Minnesota. Psychology.

De-Min Wu. Professor, Ph.D., Wisconsin. Economics.

Jung-Yen Wu. Professor, Ph.D., California Medical Center. Molecular Biosciences.

Judy Wu. Professor, Ph.D., Houston. Physics & Astronomy.

Shu Wu. Assistant Professor, Ph.D., Stanford. Economics.

Flora Wyatt. Assistant Professor, M.S., Central Missouri State. Teaching & Leadership.

Hong-Guo Xu. Associate Professor, Ph.D., Fudan. Mathematics.


Vladimir Yamschikov. Associate Professor, Ph.D., Novosibirsk Inst. Russia. Molecular Biosciences.

O. Fiona Yap. Assistant Professor, Ph.D., Rochester. Political Science.


Patricia Ybarra. Assistant Professor, Ph.D., Minnesota. Theatre & Film.


Bedru Yimer. Professor, Ph.D., Dayton. Mechanical Engineering.

C. Bryan Young. Assistant Professor, Ph.D., Iowa. Civil, Environmental, & Architectural Engineering.

TengShua Young. Assistant Scientist, Ph.D., Oklahoma. Chemical & Petroleum Engineering.

John Younger. Professor, Ph.D., Cincinnati. Classics.

Po-Lung Yu. Carl A. Scupin Distinguished Professor, Ph.D., Johns Hopkins. Business.


Jianbo Zhang. Associate Professor, Ph.D., Pennsylvania State. Economics.

Sandra L. Zimdars-Swartz. Professor, Ph.D., Claremont. Religious Studies.

Mary K. Zimmerman. Professor, Ph.D., Minnesota. Health Policy & Management, Sociology.

Wolfram Zuckert. Assistant Professor, Ph.D., Basel, Switzerland. Microbiology. Molecular Genetics, & Immunology.
The Graduate School
and International Programs

Diana B. Carlin, Dean
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535, (785) 864-6161

Goals of Graduate Study ............................ 37
The Graduate Faculty ................................. 37
    Regular Graduate Faculty Membership ........ 37
    Chair of Doctoral Dissertation Committees
        (Dissertation Status) ................................. 38
    Ad Hoc & Special Graduate Faculty Appointments ... 38
    Ad Hoc Appointments ..................................... 38
    Special Appointments ..................................... 38
    Graduate Education Privileges (chart) ............... 38
The Graduate School ................................. 39
    International Programs ................................ 39
        International Student Policy ....................... 39
        Office of International Programs .................. 39
        KU Medical Center International Programs ...... 40
Interinstitutional Programs & Studies .......... 40
Fellowships & Scholarships ...................... 40
    Chancellor's Fellowships .............................. 40
    Honors Fellowships ...................................... 40
    First-year Graduate Fellowships ..................... 40
    Madison & Lila Self Graduate Fellowships .......... 41
    Dissertation Fellowships ................................ 41
    Melik Graduate Fellowships/Scholarships .......... 41
    Minority Teaching Assistantships ................... 41
    Dwight Eisenhower/Clifford Roberts Fellowships 41
    Harry S Truman Good Neighbor Awards ............... 41
    Direct Exchange Scholarship Program ............... 41
    Departmental Fellowships & Traineeships .......... 42
    Graduate Student Travel Funds ....................... 42
Preparing Future Faculty ......................... 42
    Graduate Studies Course .............................. 42
Preparing Future Professionals .................. 42
The Graduate School and International Programs

The Graduate School of the University of Kansas is responsible for graduate education at campuses in Lawrence, Kansas City, and Wichita and at educational and research facilities throughout the state. The Graduate School consists of the Graduate Faculty, the graduate student body, and the Graduate School administrative organization, composed of the Office of the Graduate School and the Graduate Divisions of the schools responsible for programs leading to degrees awarded by the Graduate School.

The Graduate School offers the Master of Arts degree in 48 fields, the Master of Science in 33, and specific professional master's degrees in 16 programs; the professional degree of Specialist in Education; and the Doctor of Philosophy degree in 63 fields, as well as professional doctorates of Education, Engineering, and Musical Arts. In these degree programs and, in increasing numbers in nondegree-oriented enrollments, on the Lawrence and Kansas City campuses and off campus, the Graduate School currently enrolls about 6,000 graduate students.

Goals of Graduate Study

Independent scholarship, competence in research or other creative work, and the nurture 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 remain significant 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 the 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.

Membership criteria for Graduate Faculty status may be found online at www.graduate.ku.edu.

Criteria for membership in the Graduate Faculty, approved by the Graduate Council, April 26, 2001:

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 Graduate School 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 the requirements of the department and the Graduate School 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 of 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. 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.

Photo, page 36: Tara Welch, assistant professor of Classics, teaches a course in KU’s Wilcox Museum of Antiquities.
Chair of Doctoral Dissertation Committees (Dissertation Status). To qualify for the privilege of chairing doctoral dissertation committees, a regular member of the Graduate Faculty must demonstrate (1) the maintenance of a continuous program of scholarly activity including a record of current scholarship, publication, and other contributions to the field; (2) a record of teaching graduate courses; and (3) continuous advising and mentoring graduate students and serving on thesis and dissertation committees. It is the graduate program’s responsibility to nominate members of the Graduate Faculty for authorization to chair doctoral committees and to provide evidence of scholarship and involvement in the graduate education program. Authorization for continuation of the privilege of chairing dissertation committees is reviewed as part of each periodic graduate program review and may also be reviewed in the context of other external or internal program reviews.

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 Standing Committee on Graduate Faculty Appointments and Authorizations for consideration.

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 the appointee’s home institution as KU courses; (3) serving on the thesis, dissertation, or examination committee of a particular student or students; 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. KU graduate students are not granted Ad hoc membership. 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 the requirements of the department and the Graduate School 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. KU graduate students are not granted Special membership. All nominations for Special appointments must

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

<table>
<thead>
<tr>
<th>Type of Graduate Faculty appointment</th>
<th>Employed by</th>
<th>Type of faculty app't.</th>
<th>Teach graduate courses</th>
<th>Serve on master’s &amp; doctoral committee</th>
<th>Chair2 master’s committee</th>
<th>Serve as outside member on doctoral committee</th>
<th>Chair2 doctoral committee</th>
<th>Co-chair2 doctoral committee</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>No</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></td>
</tr>
<tr>
<td>Ad Hoc Graduate Faculty</td>
<td>Not by KU or any of its affiliates</td>
<td>Non-tenure-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>Non-tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

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

*2A faculty member with the appropriate status may 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.
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 the requirements of the department and the Graduate School are met.

Faculty members given a notice of nonreappointment are not eligible to hold Graduate Faculty status.

The Graduate School

The graduate student body is composed of those persons admitted to graduate study in the Graduate School by the Graduate Divisions of the college and schools and currently enrolled in graduate programs.

The Office of the Graduate School comprises the Dean of the Graduate School and any Associate or Assistant Deans of the Graduate School.

Along with its traditional undergraduate administrative structure, each school (Architecture and Urban Design, Business, Education, Engineering, Fine Arts, Journalism and Mass Communications, Pharmacy, and, for the doctoral degree, Social Welfare) maintains a Graduate Division*, headed by a Dean or Director of Graduate Studies. Graduate Studies on the KU Medical Center campus maintains the Graduate Division* for the Schools of Allied Health, Medicine, and Nursing. Graduate Divisions are responsible for the day-to-day administration of graduate programs under guidelines laid down by Graduate School governance. Such responsibilities include admission and retention of graduate students, maintenance of student files, conduct of degree examinations, approval of course and curricular changes, and granting of exceptions to Graduate School regulations. For graduate students in the College of Liberal Arts and Sciences, these functions are shared between the Graduate School and the dean’s office of the College of Liberal Arts and Sciences. Graduate Divisions report to the Graduate School dean on matters within the dean’s purview and refer other matters directly or through appropriate committees for action.

In 1997, the Graduate School adopted a new Constitution and Bylaws. The governance bodies of the Graduate School are the Graduate Council and five standing committees. The Graduate Council is made up of representatives from each graduate degree-granting department or program of the Graduate School. The Graduate Council is responsible for setting and maintaining major policies having to do with graduate education brought to it by the Dean of the Graduate School or the standing committees. Its actions are final unless the council chooses by a two-thirds vote to place a motion for voting by mail ballot before the Graduate Faculty, the Graduate Executive Committee, and the representatives of all Graduate Student Organizations. In such a case, a majority of those voting by mail determine the issue.

Each standing committee is made up of members of the Graduate Council and has specifically assigned responsibilities. The standing committees are New Degrees and Degree Program Changes; Program Review; Graduate School Fellowships, Scholarships, and Student Affairs; Graduate Faculty Appointments and Authorizations; and the Executive Committee. The Executive Committee receives reports and recommendations of the other standing committees; determines whether new matters should go to one of the standing committees, to an ad hoc committee, or to the entire Graduate Council; sets the agenda for Graduate Council meetings; and refers committee recommendations and reports to the Graduate Council.

*The term “Graduate Division” without further qualification indicates the administrative office of each school responsible for graduate programs.

International Programs

International Student Policy

The University of Kansas believes that the increasing interdependence of the nations of the world makes any kind of isolationism undesirable. Personal interactions among qualified foreign students and U.S. students and faculty can help all those involved to eliminate prejudices and cross-cultural misunderstandings. The experience should create a healthy appreciation of the world’s cultures, ideas, and nationalities.

Office of International Programs

Dean: Diana B. Carlin
Strong Hall, 1450 Jayhawk Blvd., Room 300,
Lawrence, KS 66045-7535
(785) 864-6161, www.ku.edu/~oip

The office 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 this 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.

Besides Direct Exchange Scholarship programs, KU offers 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 France-Comté, Besançon (France)
Gornyi Institute, St. Petersburg University (Russia)
University of Santiago de Compostela (Spain)
Ivan Franko University, Lviv (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 Office of Study Abroad, Lippincott Hall, 1410 Jayhawk Blvd., Room 108, Lawrence, KS 66045-7515, (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, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535, (785) 864-6161.

All students are required to inform their department of their degree programs. Applicants for admission, consulting department or International Programs, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535, (785) 864-6161.

Fellowship and graduate teaching assistantships are available.

The 2004 edition of U.S. News America’s Best Graduate Schools ranks 22 KU graduate programs in the top 25 among the nation’s public universities.

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. These include:

- Cooperative doctoral program in geology with Kansas State University.
- Cooperative doctoral transfer program in teaching and leadership with Emporia State University.
- Cooperative doctoral transfer program in teaching and leadership with Pittsburg State University.
- Cooperative master’s program 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 Interexchange 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.

Fellowships and Scholarships

The Graduate School has available a limited number of fellowship awards to recognize academic superiority and to assist meritorious students in the timely completion of their degree programs. Applicants for admission to the Graduate School who wish to be considered for these awards must supply the required supporting materials to the proposed major department. Graduate students interested in fellowships should consult their departmental or program advisers and request that formal nomination be made to the Graduate School. Nominations must be made on standard forms supplied by the Graduate School, accompanied by letters of recommendation, current official transcripts, and if available, additional evidence of scholastic attainment. Each nominee must prepare a statement describing academic and professional goals and the effect that an award would have in attaining these goals. It is the responsibility of the nominee and department to provide all materials required for evaluation of the nominee’s qualifications. Applications must include Graduate Record Examination aptitude test scores. In some cases, scores from other nationally administered standardized tests for graduate admission may be substituted, but only if the program requires this test for admission.

The records of award holders who have tenure remaining at the end of each enrollment period are reviewed by department and program advisers. A report is submitted to the Graduate School regarding academic progress, along with a recommendation for continuation or discontinuance of the award. Continuation is dependent principally on maintenance of a high level of achievement and satisfactory progress toward the degree, although all appointments are contingent on the availability of funds.

Chancellor’s Fellowships. Starting in fall 2003, the Graduate School will award two Chancellor’s Fellowships. In years one and three, the fellowships provide $21,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. The department is expected to offer a graduate teaching or research assistantship in year two, and the Graduate School provides a supplemental scholarship to raise the salary stipend to $21,000. Departments are expected to offer teaching or research assistantships for the fourth year, if needed. These fellowships recruit outstanding students for doctoral programs. Preference is given to departments not eligible for Self Graduate Fellowships. Chancellor’s Fellows must participate in either the Preparing Future Faculty or Preparing Future Professionals program.

Honors Fellowships. Honors Fellowships recruit outstanding students for graduate programs. They provide a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. Awards are made during the first and fourth or fifth year of study. For students seeking only the master’s degree, the award is made for the first year of study only. Departments are expected to offer a half-time teaching or research assistantship for the two or three intervening years for the doctoral student and for one year for the master’s student, provided the student maintains good academic standing and satisfactory employment performance.

First-year Graduate Fellowships. Students who are nominated but are not awarded Honors Fellowships are eligible for consideration for First-year Graduate Fellowships. Alternates for Honors Fellowships are also eligible. This one-year award includes a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. The nominating department must guarantee that the recipient will maintain good academic standing and satisfactory employment performance.
be supported for at least three succeeding years by teaching or research assistantships for doctoral students and for one year for master’s students, provided the student maintains good academic standing and satisfactory employment performance. Preference is given to nominees who would profit significantly from the released time from teaching or other duties.

Madison and Lila Self Graduate Fellowships are four-year doctoral fellowships to support outstanding students in the physical and biological sciences, engineering, mathematics, business, and economics. Self Fellows demonstrate the potential to make significant contributions to their fields of study and to society as a whole. For academic year 2002-03, the award includes a stipend of $19,000 plus $2,000 for educational activities and full tuition and fees for fall and spring semesters.

Dissertation Fellowships. This one-year award includes a stipend of $14,000 plus payment of tuition for up to 3 graduate credit hours. Factors considered favorably are service as a teaching or research assistant, previous awards or scholarships, superior academic performance, good departmental evaluation, and a clearly stated proposal. Preference is given to students who expect to complete their dissertations during the award year and to those who have completed their comprehensive examinations. Preference is given especially to students who have been supported by teaching assistantships during all or most of their graduate study and to those who would profit significantly from released time from teaching or other duties.

Melik Graduate Fellowships/Scholarships. The Melik Fellowship recruits outstanding U.S. ethnic minority students for graduate programs. The award provides a stipend of $10,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. Awards are made during the first and fourth or fifth year of study. For students seeking only the master’s degree, the award is made for the first year of study only.

Minority Graduate Teaching Assistantships. Graduate teaching assistantships are available to new U.S. ethnic minority students. The nominee must self-identify as Asian American, African American/Black, Native American, or Hispanic/Latino and must be a U.S. citizen or permanent resident. The Graduate School and the department share in funding a four-year appointment, authorized by the department. The student must maintain good academic standing and satisfactory employment performance to continue. Salaries are at the normal rate for such appointments.

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 to 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 $7,500.

Harry S Truman Good Neighbor Awards. The Harry S. Truman Good Neighbor Award Foundation has invited KU to screen nominations for the Jerry Smith Scholarship for International Studies and 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. The Graduate School also maintains direct exchange scholarship programs with the University of Birmingham in England; with the Ecole Superieure de Commerce/University of Clermont-Ferrand and University of Strasbourg in France; with the Universities of Bonn, Erlangen-Nurnberg, 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, U.S. graduate students receive tuition and an allowance toward maintenance for an academic year of study abroad, while students from the counterpart universities in Europe and China are similarly supported at KU. U.S. students must be enrolled as graduate students or graduating seniors at KU (who must gain admission to the Graduate School 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 is normally made in the fall for awards in the following academic year, but competition opens in May. Application forms and detailed information are available at the Office of International Pro-
Preparing Future Faculty

To support the professional development of graduate students seeking academic positions, the Graduate School offers the Preparing Future Faculty program. It consists of a colloquium each semester on the academic job search process; GS 800 Preparing Future Faculty, a course overview of choosing an academic career; and a program that allows KU doctoral candidates to visit and meet faculty from area colleges and universities. This program is made possible by support from the Madison and Lila Self Graduate Fellowship program. Contact the Graduate School for information.

Graduate Studies Course

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

Preparing Future Professionals

To support the professional development of graduate students seeking professional careers outside academia, the Graduate School offers the Preparing Future Professionals program. It provides workshops each semester on seeking careers outside academia. This program is made possible by support from the Madison and Lila Self Graduate Fellowship program. Contact the Graduate School for information.

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 if they meet the other requirements for this 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. Applications are available online at www.ku.edu/~graduate/gpp.html or at the Graduate School, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535. They should be completed and submitted at least 28 days in advance of the expected departure. A copy of the abstract of the paper must accompany the application form. The student also must show proof that the paper has been accepted for presentation, although this may be submitted later if it is not available at the time of application. Awards currently are made for travel expenses up to $400, pending availability of funds. Students must show receipts to claim the funds. Allocations are limited to one per applicant during his or her graduate studies. The Graduate Student Council contributes about three-fourths of these funds. Remaining funds come from the KU Center for Research, Inc.

The Office of the Graduate School is in Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535, telephone: (785) 864-6161; fax: (785) 864-4555.

The Office of the Vice Chancellor for Academic Affairs and Dean of Graduate Studies at KUMC is in 5015 Wescoe Pavilion, Mail Stop 1040, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1258.